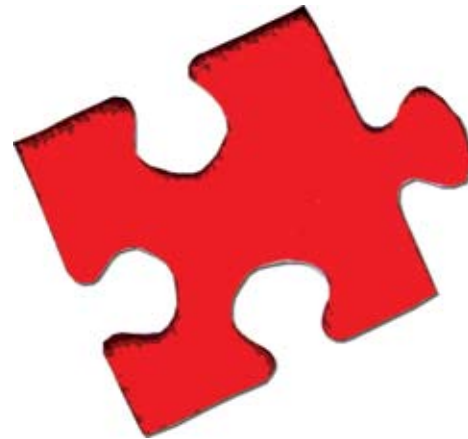


To build an Information Society in Africa, it has to be recognised that the continent's journalists are at the heart of disseminating knowledge.

The question then becomes one of maximum empowerment of African media to fully operationalise this role.

To this end, newsrooms need world-class policy, strategy and understanding in order to harness ICT and Knowledge Management.

This book tracks the state-of-play in a selection of independent African newspapers, both big and small. It also points the way forward, with explanations of "convergence", "content management", and "enterprise management". In short, it shows what theories and systems of Knowledge Management can offer the African media.



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What the Newsroom Knows: Managing Knowledge within African Newspapers



# What the Newsroom Knows: Managing Knowledge within African Newspapers

Edited by Guy Berger and Fortune Mgwili-Sibanda

# **What the Newsroom Knows:**

## Managing Knowledge within African Newspapers

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# Preface

## 1

This research report reflects studies conducted to assess and evaluate policy factors affecting the usage of Information Communication Technologies (ICTs) in the creation and management of knowledge and other informational assets in privately-owned newspapers in eight Southern and East African countries. The findings of the studies constitute useful baseline information that will guide Highway Africa, in collaboration with the New Media Lab, in planning the shape and introduction of an open source content management system [CMS] that Rhodes University's School of Journalism and Media Studies is currently developing.

The project is designed to address a problematic situation. This situation is the lack of effective and modern use of ICTs in Southern Africa's small-scale print media. The costs of incorporating such technology is an issue, but even more is how such ICTs can be appropriately integrated into the existing base. What is needed is information that can guide the introduction of these technologies, so that Africa's content producers can exploit the quality, cost and multi-platform publishing opportunities that become possible with a high-end, but effectively cost-free, CMS – such as that being developed on an open-source basis by the Rhodes University's New Media Lab, and which has the provisional name of “*Nika*”, the isiXhosa word for “to give”. This research project thus provides the information that will assess potential and pinpoint the internal policy changes that are needed for successful introduction of a CMS such as *Nika*.

Consequently the results of each study include recommendations about the challenges and limitations concerning how the targeted media could

make a transition to a modern, open-source CMS that in turn could allow for effective knowledge management and multi-platform publishing.

The study entailed on-site observations and semi-structured interviews in eight countries that included Kenya, Malawi, Namibia, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe. Each chapter of this report tracks the process flows and the sources of information within each enterprise, paying particular attention to existing technologies and internal policy considerations (or lack thereof) within each media enterprise. Put concretely, each chapter looks at how the target media understand and manage their existing information assets. This was achieved through tracking workflow processes within each organisation; how each organisation managed its content and the role of technology in this; how each organisation managed its knowledge and other informational assets – of the mass of data and info, what counted as knowledge, what counted as an asset, or a potential asset? That is, what is or can be valorised, i.e. turned into a commodity with monetary value? etc.

## Context and general background

The just-ended World Summit on the Information Society (WSIS) saw a recognition of the role of media in general as central to endeavours to build a global and representative Information Society for all. In developed countries, media in recent years has made valuable gains by exploiting ICTs in the form of sophisticated content management systems that enable efficient workflow processes and

multi-platform publishing that extend print content seamlessly onto web and cell phone platforms. With the rise of open source software, it has become possible to develop affordable and appropriate systems for African newsrooms, in theory even enabling them to leap ahead of their First World counterparts.

Indeed, Southern African small-scale print media, primarily privately- or community-owned, face many constraints in their operations. The quantity, quality and sustainability of many such independent, small-scale newspapers is limited. They have feeble and partial use of ICTs in general (computers, internet connections, cellular telephones). Their contribution of African content to global cyberspace is way below its potential.

On a global scale, relatively little published work has been done on content management systems for media. Completely absent in Southern Africa is any data on the existing internal systems (or lack thereof) of technology and relevant policy at small newspapers in the region. At the same time, such media vehicles are important factors in local democracy and development processes, and their role as content generators and disseminators – though small – is significant within an global and local environment that is information-poor concerning specific African voices, experiences, stories, indigenous knowledge preservation, etc. It is this gap the current research project intends to fill.

It is within this context, that Highway Africa undertook the current project. The idea being that *Nika* could serve as a comprehensive and freely-available open-source solution for small-scale newspapers, including taking these media into the cutting edge of ICT-enabled knowledge management in newsrooms. The relevance of this research therefore is that it will thus help strengthen the position

of independent newspapers in Southern Africa. The New Media Lab has already done several pilots of *Nika*, all of which proved to be very successful in two short-term publishing ventures in 2004 – a ten-day period around the Grahamstown festival known as Cuemedia (newspaper, television, radio, photo agency, website), and three days around the annual Highway Africa conference (newspaper, website). In 2007, the CMS will be further developed and applied on an expanded scale on the twice-weekly *Grocott's Mail* newspaper in Grahamstown.

## Researchers

The whole research project was also meant to expose working journalists on the School's Masters programme to the skills of doing research. Building capacity in this way, the current study took further a project with an earlier and different group of students supported by IDRC in 2004 that was titled: "How are 'early adopters' among African journalists and newsrooms using ICTs in their work?". The current project extends the area of research under the previous study in that while the 2004 project examined individuals' use of ICTs, the focus now expands to the systems of the enterprise as a whole, looking at the institutional-level context.

The following are the journalism school's current and former students that were involved in the research:

**Brian Garman** (South Africa) started designing and writing while working for an agricultural development organisation and developed an extensive freelance career in science and agricultural writing and design. He has worked as production manager and managing editor of the official Grahamstown National Arts Festival publication



Cue, editor and production manager on SciCue and worked on the design of Rhodes Journalism Review. He is a holder of a BSc (Hons) (UNP).

**Alphonsius Hamachila** (Zambia) holds a Master of Arts in Journalism and Media Studies (Rhodes University) and is currently Public Relations Manager at the Zambia Privatisation Agency, Lusaka, and part time Lecturer in Public Relations with Cavendish University in Zambia. He has previously worked as a journalist in his home country and also as a media liaison officer at the International Rehabilitation Centre for Torture Victims (IRCT) in Denmark, where he helped to draw up an IRCT media strategy for Sub-Saharan Africa. He also did public information works for the Amnesty International (Danish Chapter) and the Danish Centre for Human Rights, in Copenhagen. His MA thesis explored the use of the Internet in newsgathering in Zambia's The Post newspaper.

**Douglas Hampande** (Zambia) is a lecturer of journalism and public relations at the Evelyn Hone College in Lusaka. He has worked for the print media as a reporter and deputy editor at the *Zambian Post* and *The Monitor*, respectively, both in Lusaka. Douglas holds a BA General in Mass Communication from the University of Zambia (UNZA) and is currently studying towards a Masters degree in Journalism and Media Studies at Rhodes University.

**Denis Jjuuko** (Uganda) is a media researcher and communication consultant based in Kampala. Previously, he worked as a journalist at *The New Vision* newspaper, also in Kampala. He has also worked on several media and communication consultancies in East Africa for international organisations such as the German Technical Cooperation (GTZ), Rotary International, and government ministries and projects. He holds a MA Journalism and Media Studies from Rhodes University and a Bachelor of Mass Communication from Makerere

University. Jjuuko was recently appointed to the Communication Committee of Gifted By Nature Inc, a not-for-profit company tasked with branding Uganda.

**Aamera Jiwaji** (Kenya) is currently studying for a Masters Degree in Journalism and Media Studies with Rhodes University. After graduating from University in 2001 with a Bachelor of Arts (Hons) in Journalism, Aamera joined the National Council for Law Reporting in Nairobi as its Publishing Officer, where she has been to date. Aamera also writes for Kenya's *Daily Nation*, *The Lawyer* magazine, and G21.net.

**Vincent Maher** (South Africa) has 10 years of experience in structural design and corporate content management strategy, working for clients like DSTv/Multichoice, SAA, First National Bank, Virgin Active, South African Tourism, Standard Bank, Nandos and Visa Gold Asia. He currently teaches the New Media specialization, writes for various industry publications and consults to industry. Vincent was recently named among the Top 100 South Young Africans to know in the ICT and Technology sector. He is a holder of a BA (Hons) degree in Journalism and Media Studies from Rhodes University.

**Rashweat Mukundu** (Zimbabwe) currently works for the Media Institute of Southern Africa (MISA) as the National Director of the Zimbabwe Chapter. Previously, Rashweat worked for the Zimbabwe Independent as a political reporter before joining MISA-Zimbabwe in 2001. Mukundu is a board member of the Zimbabwe Election Support Network (ZESN) and also chairs the Editorial Board of the National Constitutional Assembly (NCA). He holds a Bachelor of Arts (Hons) degree from the University of Zimbabwe and is currently studying towards a Master of Arts degree in Journalism and Media Studies at Rhodes University.

**Sizani Weza** (Zimbabwe) graduated with a BSc (Hons) in Psychology in 1997 before enrolling for a post-graduate Diploma in Media Studies from the University of Zimbabwe in 1998. Afterwards, he worked for the Media Monitoring Project Zimbabwe (MMPZ) between 1999 to 2004 as Advocacy and Communications Officer after which he joined the Swedish Embassy as Programme Officer (Communication and Information). In his media career, Weza has also helped in setting up media monitoring projects in Tanzania and Namibia, and has also been involved with the Southern African Communications for Development (SACOD). He is currently employed as Information Specialist with the US Embassy in Harare and is pursuing a Masters degree in Journalism and Media Studies with Rhodes University.

## Sponsorship

The research was supported by a Rhodes University research grant as well as funding by FreeVoice, a Dutch media development organisation. Originally set up in 1986 by media and journalism organisations in the Netherlands, FreeVoice supports media independence, pluralism and freedom around the world. For more information, please visit the FreeVoice website on: [www.freevoice.nl](http://www.freevoice.nl)

## A word of thanks

Finally, the School of Journalism would like to thank, on behalf of Rhodes University, all the media houses that agreed to participate in the study. Their generosity in allowing our researchers to disrupt their daily schedules to attend to their queries and to show them around is sincerely appreciated. We believe it is only through such collaborations between media houses and academia that we can take African journalism to greater

heights, especially in the information age such as we live in today. We would like to extend a word of thanks also to Stephen Quinn for his comments on the research.

## About the editors

**Professor Guy Berger** is Head of the School of Journalism and Media Studies, Rhodes University, Grahamstown. Berger was named as one of “50 people to know in New Media” by the US-based Online Journalism Review in 1998. In 2003, he was made an Associate Member of the World Technology Network in recognition of his work on the Highway Africa conference. Berger founded the New Media Lab at Rhodes in 1995, and has published several books on ICT and journalism.

He writes “Converse” - a fortnightly column for the Mail & Guardian online ([www.mg.co.za/converse](http://www.mg.co.za/converse)), and maintains his website: <http://guyberger.ru.ac.za>

**Fortune Sibanda** is a current MA student at Rhodes University's School of Journalism and Media Studies. He holds an English Honours Degree from the University of Zimbabwe, as well as a Post-graduate Diploma in Communication and Media Studies from the same institution. Fortune has been at the forefront of community radio development in his native Bulawayo (Zimbabwe), where he has helped set up a community radio station called Radio Dialogue FM, the only community radio project in the Zimbabwe to date. He has also worked as a Media Studies lecturer and course co-ordinator at the Zimbabwe Open University (Bulawayo), and as a Research Officer at the Media Monitoring Project (Zimbabwe) in Harare.

# Knowledge Management Theory and the Media by Fortune Sibanda and Guy Berger

## 1. Introduction

The world is increasingly becoming an information society and the media are key players in the information environment but they do not often look at what this means in terms of where they fit in with regards to data, information and knowledge. At the same time, there is a body of theory called knowledge management (KM) which seeks to address the relationship between the data, information and knowledge and the role of information communication technologies (ICTs). The first part of this introductory chapter discusses this relationship between knowledge, information and data. It argues that although the words are used interchangeably by many people, they refer to different things. The chapter then narrows its attention and focuses on defining knowledge and outlining its unique characteristics. The second part of the introduction seeks to define the concept of knowledge management, as well as to sketch out its major tenets. Finally, the role of information technology (IT) in knowledge management is tackled, with specific reference to news organisations.

## 2. Data, information and knowledge

Simply put, data are facts, observations, pictures, and numbers, etc., presented without context<sup>1</sup>. For example, the symbols '911' presented as they are without any context are meaningless, beyond being recognisable as numbers. Although devoid of context and meaning, data can be easily captured, stored, and communicated using electronic or other tools<sup>2</sup>. Information, on the other hand, is data presented in context. This is to say that it is facts and figures based on reformatted or processed data<sup>3</sup>. Unlike data, information aids understanding of relations between variables and helps decision-making. It has meaning, purpose, and relevance. Thus, if the symbols '911' appear next to a telephone icon, it can mean they represent a telephone number. However, the same symbols can take on a different meaning if they appear in an international news report about terrorism for example.

Knowledge extends the concept of information even further; it can thus be said that knowledge is organised information, together with an understanding of how to use it<sup>4</sup>. Many definitions of the concept link it to information. For example, some say that knowledge is "the cumulative stock of skills derived from the use of informa-

tion” (Burton-Jones, 1999:5-6), while others say that it is “a fluid mix of framed experiences, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences” (Bukowitz and Williams, 1999:37). To build further on our example, 911 becomes knowledge when one can link the information that the dramatic connotations of what is an emergency telephone number in the United States, carry over to the rendition of September 11 as ‘9/11’, a date that marks the Al Qaeda attacks on US targets in 2001. Tiwana (2000) views knowledge as actionable (relevant) information available in the right format, at the right time, and the right place for decision-making<sup>5</sup>. When 9/11 is used to legitimatise the war on Iraq, this implies that Iraqi president Saddam Hussein backed the Al Qaeda, and it can be exposed as a distortion by the application of knowledge that this was not the case.

Generally speaking, information answers the ‘who’, ‘what’ ‘where’, and ‘when’ questions, whereas knowledge answers the ‘how’ and ‘why’ questions. Wisdom, it could be further suggested, is the answer to the ‘so what’ question. In other words, while information is the ‘know that’ of things or agents, knowledge is the reasoning and the ‘know how’ of doing things. However, this is not to imply that knowledge is a ‘recipe’ or a defined procedure to deal with specific situations in life; it is only “the capability... that permits us to envision possible ways of handling different situations and to anticipate implications and judge their effects. It allows us to improvise” (Wiig, 2000:9).

Although knowledge is derived from information in the same way that information is derived from data, it is broader, richer, and much harder to capture than both data and information. However, this is not to imply that knowledge is neces-

sarily superior to both data and information. In fact, in any situation, we need data, information and knowledge. None is necessarily more important than the other; it all depends on the context. As indicated in the 911 example, there is nothing intrinsic that makes something symbolise being either data, or information or knowledge. Rather, it is the purpose and function that counts and indeed the same symbols can constitute a different entity to different people. Further, some organisations rely on data more than others. Thus, the extent to which an organisation can be said to be efficient is the extent to which it applies available data, information, and knowledge to the problem at hand: “Inefficient organisations reinvent processes; survey the same area over and over again. The trick is in making sure that access to knowledge, information and data is available to the right person, at the right time, and in the right place” (Brooking, 1999:5). This statement is at the core of the principles of KM – which some have defined as “the ability to locate knowledge when you need it” (Carozzo, quoted in Quinn, 2002:19) – however, we will return to this later. For now, we will continue with our definition of knowledge and its unique characteristics.

## 2.1 Characteristics of knowledge

Knowledge is a multi-trait and complex phenomenon. It possesses a number of interesting peculiarities, but here we only discuss those characteristics that are relevant to the subject of KM. Management normally means organising, which in turn depends on planning and controlling. To do this to knowledge entails a focus on the processes and objects germane to a given enterprise or purpose. Various considerations arise from this.

First, knowledge – even when about methods and processes – can be viewed as objects.

According to this view, knowledge is something that can be stored, transferred, and manipulated. This also means that, as objects, knowledge can be found in a variety of physical locations (these will be discussed in greater detail below). However, while some knowledge can be captured and codified, most of it is difficult to capture as it is often 'stuck' or embedded as organised information in a person's mind. Even with modern IT tools, which can quickly and easily transfer information from one place to another, it is often very difficult to transfer knowledge from person to person, since those who may have the knowledge may not even be conscious of what they know or how significant what they know is<sup>6</sup>.

The second characteristic of knowledge is that the more it is shared, the more it grows. Shared knowledge has added value in the way that the more users it has, the more chances it has of being added upon, improved and enriched. Thus, its uniqueness is that unlike traditional company assets which depreciate with increased usage, knowledge actually appreciates in value<sup>7</sup>. KM has to deal with organising these characteristics of knowledge.

Third, knowledge characteristics can also be differentiated on the level on which it is viewed. For example, knowledge can be viewed as an individual's state of mind. By extension, organisational knowledge can be viewed as beliefs of the individuals within an organisation. Moreover, to the extent that the various individuals have differing experiences and backgrounds, their beliefs (and hence knowledge), also differ from one another. Consequently, the focus of KM strategies is often on enabling individuals to enhance their personal areas of knowledge so that they can apply them to best pursue organisational goals<sup>8</sup>.

Finally, knowledge can also be seen as capability; this view draws attention to the way in which knowledge can be applied to influence action. This means that knowledge can be a strategic capability that can potentially be applied to seek a competitive advantage in a business environment<sup>9</sup>. KM here means organising knowledge to serve as intelligence to inform practice.

## 2.2 Locations of knowledge

Knowledge resides in several different locations; these encompass people, including individuals and groups; artefacts, including practices, technologies, and repositories; and organisations and inter-organisational networks.

### 2.2.1 Knowledge in people

A considerable amount of knowledge is stored in people within organisations. This kind of knowledge is the reason many companies continually seek ways to retain knowledge that might be lost because of individuals leaving the organisation. Some of these ways include 'exit interviews' that some organisations conduct when one is leaving or retiring. Knowledge in people can also reside within groups of people within an institutional setting. For example, when individuals have worked together for a long time, they mutually know each other's strengths and weaknesses, understand each other's approaches, and recognise aspects that need to be communicated and those that can be taken for granted<sup>10</sup>. This 'knowledge' of each other, although often unacknowledged, makes for easier work relations which may manifest themselves in increased productivity.

### 2.2.2 Knowledge in artefacts and objects

Over time, a significant amount of knowledge

is stored in organisational artefacts as well. Some knowledge becomes embedded in organisational routines like workflow management systems (WfM)\*, and other daily routines and norms that are developed through experience over time. These routines make the production cycle less unpredictable and this can make for increased efficiency. For example, by automating the news production cycle, news organisations are able to save on time and human resources<sup>11</sup>. Knowledge in organisational artefacts can also be found in an organisation's technologies and IT systems. In addition to storing data, information technologies and computer-based information systems can store knowledge about relationships between variables<sup>12</sup>. Knowledge repositories represent a third way of storing knowledge in artefacts in organisations. Knowledge repositories can be paper-based (such as books, papers), or electronic-based (such as websites).

### 2.2.3 Knowledge in organisational entities

Finally, knowledge can also be located in organisational entities. These entities can be considered on three levels; as organisational units (departments of the organisation); as an entire organisation; or as inter-organisational relationships (such as a relationship between an organisation and its clients).

In addition to location, knowledge can also be classified according to different types. The following section discusses the different types or forms of knowledge that are relevant to this study.

## 2.3 Types of knowledge

There are many different types of knowledge. These include tacit and explicit knowledge, pro-

cedural and declarative knowledge, general and specific knowledge, and common sense. Understanding what type of knowledge it is makes it easier for any KM intervention. These types are discussed briefly below.

### 2.3.1 Tacit and explicit knowledge

Tacit knowledge is knowledge that is deeply embedded within an individual's mind (Polanyi, 1966). It includes such abstract things as intuition, values and beliefs, etc., all of which are cultivated through experience over years. The statement 'we know more than we can tell' highlights that much of what constitutes human knowledge remains unarticulated and known only to the person who has it<sup>13</sup>. This type of knowledge, needless to say, is difficult to share and is best transferred from one person to another only through demonstration (than description), or through a long process of apprenticeship. In contrast, explicit knowledge is that knowledge which can be easily written down or codified. It is relatively easy to articulate and communicate, and is much easier to transfer both between individuals and between organisations. It can be found in formulae, textbooks, computer programmes, or technical documents like reports, white papers and manuals, etc.

It is rather ironic that many organisations have traditionally focused on the explicit part of knowledge, while ignoring the tacit dimension, although it has been estimated that only 10% of an organisation's knowledge is explicit (Nonaka and Takeuchi, 1995). Although initially thought of as existing only at the individual level, tacit knowledge also exists in organisations as well. For example, Nelson and Winter (1982) point out that much organisational knowledge remains tacit in the way that most organisational routines are passed on from generations to generations of workers. The one reason why

tacit knowledge is rarely managed is because of the difficulty involved in its extraction. Yet the success of any KM strategy to produce the much vaunted competitive edge depends heavily on how well the organisation manages the tacit aspects of its individual and collective knowledge<sup>14</sup>.

### 2.3.2 Procedural or declarative knowledge

Another distinction of knowledge is between declarative knowledge (facts) and procedural knowledge (the 'how to' knowledge). According to this perspective, declarative knowledge is information that people can easily discuss and share; it is 'shallow' knowledge that can be easily recalled, because it is simple, uncomplicated information<sup>15</sup>. Procedural knowledge, in contrast, focuses on beliefs relating to the sequences of steps or actions to get desired (or undesired) outcomes. It is an understanding of how to successfully do a task or carry out a procedure. This kind of knowledge is difficult to articulate or recall and is best shared through practical demonstration.

### 2.3.3 General or specific knowledge

Another level of the classification of knowledge focuses on whether the knowledge is possessed widely or narrowly. While general knowledge is possessed by a large number of individuals and can be transferred easily across time and space, specific knowledge is possessed by a limited number of individuals, and is often expensive to transfer<sup>16</sup>.

### 2.3.4 Common sense as knowledge

This is another type of knowledge that all human beings possess in varying forms and amounts.

Common sense is the type of knowledge humans normally take for granted because it is acquired unknowingly over time. It is interesting to note that while any ordinary human has an extensive base of common sense knowledge to draw upon, the fastest mainframe computers that can calculate pi to a thousand decimal places in seconds 'know' nothing about some of the simplest things that even four year-old human beings take as commonsensical.

Having defined knowledge and outlined its characteristics, locations and forms, we now turn our attention to how it can be managed. The following section defines what KM is and discusses some of its key characteristics and features.

## 3. Knowledge management (KM)

KM is a complex, multilayered and multifaceted concept. This is illustrated by the number of differing opinions about its essence and definition. Nevertheless, most agree that it is something to do with the systematic organisation of knowledge to achieve organisational benefits. We will discuss some of these definitions and approaches below. Later, we will narrow down the discussion to KM practices in the newsroom.

### 3.1 What is knowledge management?

The underlying theory of KM is that you can accumulate knowledge assets and use them effectively to gain a competitive advantage [Brooking, 1996]. Literally taken, this implies that organisations that accumulate a large quantity of relevant knowledge would acquire a competitive edge. With today's emphases on 'sustainable competitive advantage', 'added value', and improved productivity, all organisations need to find ways to create, innovate, monitor, and protect the knowledge that exists in their inventories<sup>17</sup>.



The definition of KM that is adopted for the purposes of this study is borrowed from Ahmed et al., who describe the practice as, “the coming together of organisational processes, information processing technologies, organisational strategies and culture for the enhanced management and leverage of human knowledge and learning for the benefit of the company” (2002:12). This means that all KM strategies should emphasise a focus on generating new knowledge; transferring existing knowledge; embedding knowledge in products, services, and processes; developing an environment for facilitating knowledge growth; and accessing valuable knowledge from inside and outside the organisation’s operational environment.

Contrary to the human knowledge base which consists of a virtually limitless memory, corporate knowledge bases are bound by time, space and human resource constraints. As a consequence, the efficient management of an organisation’s knowledge assets is the key to attaining a competitive advantage<sup>18</sup>. These assets take many forms such as market reach, employee expertise, intellectual property and infrastructure such as organisational processes, systems and methods. They are created by acquiring data and information from the environment, and refining these to make them meaningful and useful to the employees of the organisation, in such a way that they can be converted into the methods, procedures, know-how and organisational rules which will enable the organisation to meet its goals efficiently<sup>19</sup>.

Central to the process of KM are four stages, namely; knowledge generation, knowledge codification and storage, knowledge refinement, and knowledge transmission<sup>20</sup>. Knowledge generation includes all activities which bring to light knowledge which is ‘new’ to the individual or to the organisation. Central to this is the need

for an organisational culture that is accepting of new ideas and is prepared to encourage activities aimed at knowledge sharing. It is only through the sharing of knowledge that we become aware of the gaps in our own knowledge<sup>21</sup>. In particular, there should be more emphasis on tapping, sharing and preserving the tacit knowledge that exists within the organisation. Because this kind of knowledge is embedded in company processes – hidden away from view yet very much there – KM strategies should be used to surface it and make it available for critical scrutiny and possibly, improvement. If knowledge is power, then sharing it will multiply power across the organisation. What this means, however, is that KM may run into challenges at the level of organisational hierarchies and corporate confidentiality. Information secrecy and security are issues in KM. Thus, KM strategies should be informed by an understanding that knowledge ‘hoarding’ is a common thing. As long as job security is based on the special knowledge that we have, it continues to be a challenge to knowledge sharing strategies.

Knowledge codification is the systematic capture and classification of knowledge so that it can be re-used, either by an individual, or by an organisation. There are various ways of codifying knowledge, and technology has provided us with one the easiest – although not the only – ways of doing it. Knowledge refinement likewise can be enhanced by technology – for example by revealing statistical trends in the information that underpins the knowledge. Knowledge transfer involves the movement of knowledge from one location to another and its absorption by individuals<sup>22</sup>. The dissemination of knowledge across time and space is often a catalyst for the generation of new knowledge in that people adapt and negotiate with the received knowledge in order to make it useful for other purposes.



### 3.2 The role of technology in KM

KM tools are technologies, broadly defined, which enhance and enable the four stages of knowledge management referred to above. However, this is not to imply that IT provides the only tools for knowledge management. In fact, to borrow from Quinn, “technology is just an enabler” in the whole process (2002:23). This section evaluates the role that IT plays (and can play) in the management of an organisation’s knowledge assets.

Having a telephone does not ensure worthwhile conversation (although it can be argued that certain telephones make the message clearer and more easily understood). This is to say that having more IT tools is not a guarantee for improving the state of knowledge management within an organisation. For example, one of the revolutionary tools of our age, the internet, provides for the quick transfer of huge volumes of information in ways previously inconceivable to the human mind, yet to assume that because of this, the world wide web can ‘deliver’ knowledge to one’s desktop may be a bit too simplistic and naïve<sup>23</sup>. Managing organisational knowledge requires getting individuals and teams to share information, experiences and insights, through a dual process of collection (plus codifying and storing the knowledge obtained) and connecting (linking people who need to know with those who do know). In both levels, the human being remains central: new technologies can only but facilitate this process as a form of a supportive mechanism.

In the final analysis, therefore, information technology tools can certainly support some aspects of knowledge management, but the process does not begin and end with information technology. Success with KM can only be achieved when individuals within an organisation are

ready to communicate, connect and share<sup>24</sup>.

### 3.3 Managing knowledge in the newsroom

While KM began originally as a corporate sector tool, it has now pervaded all forms of organisations, not the least among them being media organisations. However, as information-based organisations, it is rather ironic that media houses caught up with the practice much later than many other corporate enterprises.

The present study proceeds from the notion that modern journalists and editors need to work smarter in the information age. The simple provision of data and information to audiences is not enough; as the information age evolves, journalists and editorial executives will also need to work more and more with knowledge generation and provision<sup>25</sup>. KM is one of the key tools that can aid news producers to enhance productivity and efficiency in the newsroom, and thereby enrich the knowledge output of the media enterprise:

“Knowledge management... is about improving professional practice and helping journalists learn how to do better journalism. It involves learning how to store, transfer, and share information in a form that makes it useful both now and in the future. It involves a new professional culture that fosters teamwork and collaboration. It involves learning how to manage information systematically, rather than the chaotic approach that many journalists have used in the past” (Quinn, 2002:3).

“The key is the ability to share information and ideas. Northrup argues that the ability to compete in the information economy requires new skills: communicating effectively, working collaboratively, amassing expertise, and leveraging information assets “In the parlance of knowl-

edge management... it means knowing what you know" (quoted in Quinn, 2002:21).

For news organisations, the competitive advantage depends on their ability to create and distribute products that are unique and that are presented in a timely fashion. However, while it is a widely held view that what journalists gather, share, store and publish on a daily basis is any news organisation's most valuable asset, the majority of newsrooms are still falling far short of the basic strategies of managing these intangible assets efficiently<sup>26</sup>. For example, individual journalists possess large amounts of knowledge that only they know how to use - if they leave a company, this knowledge also goes with them. Managers forget that a huge amount of tacit knowledge resides in their journalists' heads and contact books within the newsroom. In addition, while print newsrooms interact with huge volumes of data on a daily basis in the form of press releases, faxes, news tips, and press conferences, etc., only that which makes it into the space available on the newspaper's pages is retained<sup>27</sup>. Broadcasting has a better track record as regards storage of its informational assets, however, most archiving systems have often not been that comprehensive and not much value can be extracted from poorly indexed records. This is exacerbated by the fact that most news organisations have traditionally equated their knowledge assets with only that tiny proportion they have as hard copies of their products in their libraries, or saved electronically on computers.

It is in this light that KM strategies for news organisations should not only be aimed at allowing journalists to access all the information necessary for the production of a news story, but also at making sure that all the information journalists obtain while going about their daily routines is made available for further uses, to facilitate

the creation of more knowledge in an ongoing spiral (Gabriella Franzini, quoted in Roper, 2000:26). This is to imply that KM in the newsroom must aspire to capture both the tacit and explicit knowledge, both on an institutional and individual level. The aim should be to share this knowledge and make it widely available – even on qualified access terms – so as to channel it into creating unique products and services:

In a digital environment, most information can be easily copied and re-processed. However, what becomes valuable is what cannot be copied – things like integrity, trust, quality and brand name for an organisation, and the experience of individual. Journalists create knowledge in the process of synthesising information, and with time generate reputations for integrity and quality. Successful news organisations will be those that appreciate the importance of good journalism for producing those intangibles (Quinn, 2002:18).

Finally, modern newsrooms should be capable, not only of managing large amounts of raw data, but also of producing more than just one type of information for publication via a different channel. News organisations invest a lot in resources to get content, thus, this content should be exploited to the maximum, through exploring additional forms of delivery such as via mobile telephony and email subscription services. This is what is referred to as the 're-purposing' of content. However, in order to achieve this, organisations need to have good a content management system (CMS) in place for organising and storing their content. A CMS is a key component of KM since the core application of a CMS is to manage digital content during its entire lifecycle. The important thing to always bear in mind is that knowledge is not embedded in the informational content itself. Instead, it is in the processes and practices that surround a

**CMS;** a CMS simply supports the creation, management, distribution, publishing, and discovery of that knowledge.

### 3.4 Content management

Content management (CM) is a set of processes and technologies that support the evolutionary life cycle of digital content. 'Content' in the context of a media organisations includes text, images, graphics, video, sound, documents, records, tasks, calendars, etc – or in other words – anything that is likely to be managed in an electronic format\*. The life cycle of digital content consists of five phases, which namely are: creation, updating (or, in the case of news organisations, editing), publication, archiving and retiring (Wikipedia, 2006). With a print media organisation, for example, creation starts from the journalist, and updating is done by someone like a news editor or editor who normally provides some editorial oversight on the content before it is passed for publication. Publishing may take many forms: normally it involves the act of pushing content out to others (printing the actual newspaper); or simply granting digital access rights to certain content to a particular person or group of persons (as news agencies do). Later, as the organisation provides new insights on current content or generates new content altogether, the content may then be retained or removed from use, but either way CM should entail that it is stored somewhere.

A content management system (CMS) is a software tool designed to help content managers, create, manage, publish and store their content (Robertson, 2003). Typically, CMS software uses a central database to track the location of, and relationships among, content elements in the repository. When the content grows large, a CMS can collect, create, and aggregate it in ways that make it easy to retrieve for reuse

or consultation (research). Thus, unlike some databases, CMSes can index all the content stored within it, so that users of the system can find relevant content from within the database by searching for keywords, authors, or date of creation, etc.

Further, a CMS can allow non-technical authors to easily and quickly create and publish their content across different applications. It thus reduces the time required to publish a news story, allowing a news organisation to deliver content across different channels in a timely and efficient way. This is to say that a CMS allows for content to be re-purposed or re-used in several different platforms. This means that content can be created and edited in one space, but be able to be published across many media formats such as the web, PDF, mobile phone, radio, broadcast and print, etc. With the rise of convergence between different media and the cross-media publishing that has resulted, this function of a CMS becomes crucial in modern newsrooms. The quicker one gets key content published, the more value and emphasis it creates.

An important aspect of a CMS is that it allows a team of content creators (from journalists to news editors, editors and sub-editors) to work on the same pages without stepping on each others toes like, for example, editing the same story twice or picking up an older version of a story for layout. In news production, there is often a need for content creators to restore older versions of edited stories due to a process failure or an undesirable series of edits. A CMS can help do this as it can schedule pages to appear and disappear at scheduled times, and archive the old pages with versioning and revision control as the content is passed through the production chain. According to one IT consultant, at its core, content management

is the separation of information – text, graphics, audio, and video – from its representation on a device, such as a computer screen, Web TV, Palm computer, newsprint, or other formatted display. This separation is usually accomplished by placing content objects and template designs into a database and invoking a computing engine to combine them during the publishing process. This also includes the ability to receive content from third parties into the system, apply workflow roles and rules to assure content completion, and a timely publishing process that distributes content to all platforms and distribution channels (Gunnerson, 2000)\* \* \*. A CMS ideally goes beyond multiple publishing functions to include knowledge management and even enterprise management functionalities as major components. Put concretely, a powerful CMS will link an intranet of knowledge resources as well as data related to mission critical data such as deadline performance, newspaper circulation, audience ratings or website traffic spikes. It is more than a workflow or database publishing: it can be a knowledge management power boost to a media enterprise.

## 4. Conclusion

The chapter presented the study's theoretical framework. It began by outlining the distinction between data, information and knowledge and argued that this distinction is central to knowledge management theory. It also sought to define, characterise and explore the different locations in which knowledge can be found. A major section of the chapter also outlined the different types of knowledge, making a distinction between tacit and explicit, procedural and declarative, and general and specific types of knowledge. The chapter also sought to define KM generally and tied it up with actual KM practices in newsrooms. Finally, the chapter focused on the role of technology in knowledge

management and noted that a content management system is one method which can be used by news organisations to manage their intangible assets.

## Footnotes

<sup>1</sup> Brooking, 1999:4-5; Godbout and Godbout, 1999:2

<sup>2</sup> Becerra-Fernandez et al., 2004:12-13

<sup>3</sup> Bukowitz and Williams, 1999:36

<sup>4</sup> Brooking, 1999:4-5

<sup>5</sup> Bukowitz and Williams, 1999:37

<sup>6</sup> Ahmed et al., 2002:11

<sup>7</sup> Ahmed et al., 2002:11

<sup>8</sup> Becerra-Fernandez et al., 2004:17

<sup>9</sup> Becerra-Fernandez et al., 2004:18

<sup>10</sup> Becerra-Fernandez et al., 2004:25

<sup>11</sup> Verwijk-O'Sullivan, 2000

<sup>12</sup> Becerra-Fernandez et al., 2004:25

<sup>13</sup> Ahmed et al., 2002:10

<sup>14</sup> Bukowitz and Williams, 1999:52

<sup>15</sup> Bukowitz and Williams, 1999:44

<sup>16</sup> Becerra-Fernandez et al., 2004:20-21

<sup>17</sup> Godbout and Godbout, 1999:6

<sup>18</sup> Bukowitz and Williams, 1999:40

<sup>19</sup> Godbout et al., 1999:1

<sup>20</sup> Ruggles, 1997:1

<sup>21</sup> Wensley and Verwijk-O'Sullivan, 2000:118

<sup>22</sup> Ruggles, 1997:2

<sup>23</sup> Wensley and Verwijk-O'Sullivan, 2000:120

<sup>24</sup> Godbout and Godbout, 1999:9

<sup>25</sup> Quinn, 2002:2

<sup>26</sup> Quinn, 2002:17

<sup>27</sup> Godbout and Godbout, 1999:1

\* Briefly, a workflow management system (WfM) tool provides a method of capturing the steps that lead to completion of a project within a fixed time-frame, and in so doing, provides a method of evaluating such steps. It is a central technique in knowledge management (Becerra-Fernandez, et al., 2004).

\* \* A common misuse of the term is to apply it simply to the software involved in creating, storing, managing and distributing content. While this is a key part of content management, the term has a broader meaning, and it includes all activities (both human and machine) which are involved from the creation, storage, management and distribution of content (Cinman, 2005).

\* \* \* See <http://legacy.poynter.org/center-piece/020701.htm> for full transcript of interview

# Chapter 1:

## Zimbabwe Mirror, Zimbabwe by Sizani Weza

### 1. Introduction

The main objective of this study is to analyse the organisational implementation of knowledge management (KM) policies at the *Daily Mirror* and the *Sunday Mirror*, with particular reference to technological and policy factors<sup>1</sup>. This is achieved through providing a description of newsroom workflow processes and flows of information assets in the organisation. A discussion of the study's findings is followed by recommendations and a conclusion. The recommendations of the research point to a need to invest in information communication technologies (ICTs) in order to enable the organisation to manage and transfer the knowledge it generates daily effectively. The methodological tools that were used to conduct the research included participant observation and semi-structured interviews.

### 2. Background to the study

Since its establishment in December 1997, the Zimbabwe Mirror has undergone several changes in ownership structure and content. It started as a weekly newspaper (the Sunday Mirror) and in 2003, added a daily edition, the Daily Mirror. The daily was however closed for some time during the same year due to financial constraints, but it was re-introduced again in August 2004. The Zimbabwe Mirror group continues to publish both editions to date. Reading from the two sister newspapers' mission statements and objectives, the Daily Mirror is concerned with reporting facts and daily events as they happen, whereas the Sunday Mirror is concerned with linking

these events to the wider social, economic and political environment. Thus, the Sunday Mirror is expected to be more analytic in its orientation and has a regional focus, whereas the Daily Mirror covers local events and issues as and when they occur.

In June 2005, just as this study was about to begin, the two publications' newsrooms – which were previously housed in different floors of the same office block – were merged into one as the organisation tried to cut down on costs in an economically volatile environment. In the new set-up, staff from the two editions started using one newsroom on the ground floor of the same building, which meant that they were now going to share such resources as computers and telephones between them. These changes, doubtless, presented major implications for the organisation's newsroom routines and workflow system; these will be discussed in greater detail below.

### 2.1 Organisational philosophy

During one of my first interviews, it was revealed to me by one member of the senior editorial staff that the Zimbabwe Mirror worked within a defined philosophical position, which demanded that their journalists are “Zimbabwean first and journalist second”. This maxim obviously carried with it specific behavioural and attitudinal requirements from its journalists. For example, it implied that in carrying out their day-to-day duties, journalists were to priori-

tise the interests of the 'nation', before the needs of their professional practice. However, I found out that this maxim is not written down anywhere in the organisation's founding deeds, or even on its mission statement and objectives. In addition, there seemed to be no written policies to ensure that editorial staff abide by this philosophy when writing or editing stories. The Zimbabwe Mirror's two publications' mastheads are also silent on the matter, stating only that the titles have a commitment to "keep the people of Southern Africa well informed on political, social and economic issues in the region." Journalists interviewed during the study said that there was a lack of clarity on the actual meaning of the maxim as it was never explained to any of them during induction. Usually, they said, they covered all the events/issues that came to their attention, but would leave the actual angling of the stories to the senior editorial staff.

Information gathered during my interviews indicated that the maxim (and the philosophy it espoused) was passed down from generations of staffers until a time when no one queried its origins, or indeed, its validity. Senior editorial staff actually said they found the maxim quite helpful as it assisted junior journalists to have a particular orientation when writing stories, and also in terms of their selection of which events to cover in times when there is more than one big event happening at the same time. However, the maxim also has had its downside. For example, one of the news editors complained that junior reporters were "over-exercising" its requirements particularly when it came to political news reportage. As a result, he said, editors had to watch out for instances of "praise-singing" in the stories, and ensure that their news product was moderated in order to adhere to the journalistic ideals that are contained in the newspaper's editorial policy.

A former news editor I also talked to revealed that the Zimbabwe Mirror's philosophy seems to

be compromising the newspaper in the market as most journalists simply take it to mean that they must support everything that is said by the government. This puts editors under immense pressure. One senior editorial staffer admitted to this pressure, saying that they constantly have to juggle between maintaining the organisational philosophy and also ensuring that the newspaper attracts advertising: "We look at the percentage distribution between advertising and editorial, and if it is not 60 percent advertising and 40 percent editorial, editorial staff would write a memo to the advertising department demanding to know the causes... [and] it is not unusual for them [the advertising department] in response to attribute this failure to the content of the newspaper." He also noted that on the occasions the newspapers covered "juicy stories" exposing irregularities in government, they had come under severe attack from the government for being "anti-Zimbabwean" and "unpatriotic".

### 3. Methodology

#### 3.1 Data collection

Data was collected primarily through interviews and participant observation. The process proved to be a lengthy exercise requiring patience and maximum use of the limited resources. While observation was relatively easy, carrying out interviews was problematic as I had to squeeze them into the individual journalists' tight schedules. Although initially only four days were allocated for the study, some stages of the data collection process took longer than expected as I had to make follow-up interviews to reconcile some responses, or to seek further clarifications from the respondents. This meant that the whole research ended up taking more than eight days. Background information on the organisation was obtained from two former employees of the Zimbabwe Mirror. Their input made my entry much easier.

## 3.2 Designing the questionnaire

The initial interview questions were drawn from the framework for establishing existing and missing knowledge in organisations provided by Liebowitz (2001). This was pre-tested and adapted to suit the Zimbabwe Mirror. During the pre-testing process, the need to clearly define knowledge management as distinct from data and information management was evident. Knowledge was seen as that which could add value to the information and data available in the organisation. Admittedly, individuals knew more than they could tell, but it took more prodding than what was in the questionnaire-based interviews to elicit these responses. For much of what they knew, staff at the Zimbabwe Mirror seemed not aware that there were policies that were in place to ensure that their knowledge was used to benefit the organisation. Senior editorial staff were also not sure whether some policies were still in existence because of ever-changing circumstances in which the organisation was operating under, and also due to the limited technologies that were available to ensure the effective implementation of these policies.

## 3.3 Problems encountered

Participant observation revealed more than respondents could tell, confirming Polanyi's maxim that "we know more than we can tell" (in Patriota, 2004:5). Very often, respondents thought some of the information might not be useful for the research or simply would have forgotten to mention the issue during the interview process.

The attempt to distinguish between tacit and explicit knowledge was practically a difficult task to achieve in reality, given the limited time spent at the organisation. In addition, it was also possible that some respondents claimed some tacit knowledge which they did not possess - or rather,

which others within the organisation felt they did not possess. For example, reporters said they had knowledge about writing stories according to the news organisation's style guide, yet senior editorial and sub-editing staff said that they spent most of their time re-writing stories submitted by reporters as they did not conform to the organisation's in-house style guide. However, the researcher also noticed that although senior editorial staff complained about the junior journalists' lack of adherence to the organisation's style guide, there was no visible effort on their part to ensure that this knowledge was available at all levels of the production chain to minimise errors and reduce time spent re-writing stories.

Interviews were held with selected members of staff at the news organisation and an intern in the library. However, it was not easy to interview some staff in other departments. For example, the circulation department was unwilling to reveal information about the print run and circulation figures of the newspaper, claiming that this was classified information, even though such information was actually publicly available in the Zimbabwe Media All Products Survey (ZAMPS) booklet which is updated annually. In addition, while most interviewees were more responsive to my probing during informal meetings such as lunches and coffee breaks, they were often overly cautious during the semi-formalised interviews, especially when they noticed that I was taking down notes. For example, one respondent wanted to consult with his superiors when a question on policy was posed to him. He said he wanted to make sure that the responses he gave me will be accurately recorded. At one point, one of the respondents explained to me that reporters had to be always cautious when giving out information to strangers as there were rumours about state security agents trying to get information about the political inclinations of members of staff at the Zimbabwe Mirror.



There was also the problem of identifying knowledge assets within the organisation, particularly the intangible assets that are important for the survival of the organisation in a competitive environment. From my observation, the following could be distinguished as the knowledge assets of the Zimbabwe Mirror: the networked computer system and the associated content management system (CMS) (to be discussed later); the library; the newspaper's online archives and the experience of its senior journalists. However, these knowledge assets were not fully exploited by the organisation and individual journalists, an observation that will be explored in more detail later.

The following sections present some of the findings of the study. It begins by giving an overview of the Zimbabwe Mirror's newsroom processes and work flow system. Pertinent to the findings is an exploration of the extent to which the organisation explicitly enables (and enhances) knowledge generation, codification and transfer. This implies that more attention is given to the organisation's policies on KM.

## 4. Discussion of findings

### 4.1 The two editions: the Sunday Mirror and the Daily Mirror

Scholars have argued that in the information age, media content based on data and information alone is not enough (Quinn, 2002:2). It is therefore argued that journalism – which has erstwhile concerned itself with 'the five Ws and an H' (the what, when, where and how and why) – now has to go a step further and seek to answer the 'so what?' aspect of the news it provides. The 'so what?' aspect enables individuals to relate the information to their experience and act on this information.

In respect to this, according to the information I

managed to gather from the news editor of the Daily Mirror, the daily edition can be said to be providing readers with information on events and issues happening around the world, while its sister publication strives to convert this information into knowledge, in the way that it dissects the issues that are covered by the daily news media by linking them to the wider economic, social and political context, and scrutinising them for their wider implications and significance. The news editor revealed that in order to achieve this, the Zimbabwe Mirror has different recruitment policies for its two newspapers. He said that for one to be considered a reporter/feature writer at the Sunday Mirror, a minimum of a university degree was a pre-requisite, while journalism diplomas were enough for one to get a job at the Daily Mirror. This, by implication, meant that the reporters at the Sunday edition were more inclined to writing analytical in-depth articles, while those in daily edition produced event-based reports. In practice, however, there were no clear-cut differences as some stories that were collected for the Daily Mirror ended up being published in the Sunday Mirror, and vice-versa. An analysis of the content of the Daily Mirror, also confirmed that this rule is not strictly enforced. Some of the stories in the Daily Mirror have adequate context to qualify as news analysis than event-based reports.

In fact, some journalists at the Daily Mirror felt that this categorisation is unfair as it means that they cannot not take the more challenging task of interpreting events as they occurred for their readers even if they wanted to. Besides, they argued, journalists at the Sunday Mirror have more time to research and write well-rounded, analytical stories because they did not have such tight deadlines as them. For example, it was revealed to this researcher that on an average week, a Sunday Mirror journalist must produce at least four stories - even though most of the times a maximum of three stories per journalist are published.

For the Daily Mirror journalists, in contrast, 18 stories a week is the minimum required of them. One journalist added: “It does not matter whether or not any of the stories are published. As long as I have submitted three stories to the desk editor, I will have fulfilled the organisation’s minimal requirements for an employee deserving full pay at the end of each working month.”

### 4.1.1 The consolidated newsroom

Previously, staff for the two editions was housed separately on the fourth floor of a multi-storey building in the city centre. However, due to financial constraints, the management of the Zimbabwe Mirror decided to combine the two newsrooms on the ground floor in the same block, meaning that the two publications now not only shared space but also telephone lines and workstations as well. Interestingly, it is only the news editor of the Daily Mirror who is in close proximity to the new newsroom, as he occupies the only office adjacent to the newsroom on the ground floor. The news editor of the Sunday Mirror has no office and he operates from the newsroom with the reporters on the ground floor. The rest of the senior editorial staff (including sub-editors and proof readers) are still housed on the fourth floor and have to frequently visit the ground floor for meetings with reporters.

### 4.2 Editorial policy and house style

The editorial policy of the Zimbabwe Mirror can be found on any of the computers in the newsroom in a folder named “Resources”, which also contains information on the organisation’s house style, unpublished material and common photographs such as those of politicians, prominent business persons and other newsmakers. The network also contains the Code of Conduct and other useful resources staff may need for their day-to-day work. However, most of the staff members interviewed

said that while they may have read the editorial policy “once or twice” before, they said they have never read the organisation’s Code of Conduct, stating that their behaviour was based on “intuition”.

### 4.3 Sources

To gain competitive advantage in the market, news organisations have to be able to access sources that can provide them with exclusive news tips and information. Despite their obvious importance to the organisation’s core business, the Zimbabwe Mirror does not have a centralised database of sources, or indeed, a systematic way of keeping source records. Each individual reporter keeps their own sources in their notebooks and mobile phones. Further, the way that the source details are kept means that no one – save for the particular journalist – knows which source can provide him/her with which kind of information. This is because only names and telephone numbers of sources were written down, and nothing else is written about the source’s professional (or other background) that might enable others to be able to tell about the particular source’s relevance to a story that they might be chasing. Except for public officials and other public figures, journalists interviewed said that they did not share any information about those sources that they ‘discovered’ on their own. They said doing this would constitute a breach of the unwritten rules of confidentiality between the journalist and the source. Others stated that they kept sources’ records and other details to themselves as a way of “staying ahead of the pack” in the newsroom – an issue which, doubtless, is important in terms of job security and promotion prospects.

However, senior editorial staff often assisted in accessing some difficult sources, especially high-ranking government officials. Incidences where high-ranking government sources refused to

speak to journalists because they felt they were “too junior” (and may therefore misrepresent the facts) were common. To get round this, some co-operative senior journalists would access the source and get a statement on behalf of a junior journalist in order to enable him/her to continue with their story. One senior staffer said that since there seemed to be no formal induction and mentoring process in the organisation, he occasionally had to personally introduce junior journalists to some of his sources so that they can communicate with them in instances when he was not around. This is one way in which an organisation’s tacit knowledge is transferred from one employee to another (Ahmed et al., 2002:10; Wensley and Verwijk-O’Sullivan, 2000:118).

#### 4.4 Notebooks

Journalists at the Zimbabwe Mirror are supplied with note books. However, there is no systematic way of recording notes or even the storage of these notebooks, meaning that they are not easily accessible to anyone else except the owner. Journalists revealed that none of the editors have ever asked them for their notebooks to verify stories when editing. One reporter felt that notebooks could be useful in case of litigation, but he said he had not encountered any such use since he joined the organisation nine months ago.

#### 4.5 Employment contracts

When an employee joins the Zimbabwe Mirror, he/she is required to sign a contract that contains a job description, entitlements and benefits, working hours and procedure in case of termination of contract. The contract also states that the organisation pays partial medical insurance, but only for senior staffers. There is no information about compensation in case one is injured covering assignments. A number of staffers were not happy with this.

I decided to focus on the terms and conditions of service for employees during my research because it is my belief that job satisfaction is much a human resource management issue as it is a knowledge management issue, as most staff choose to stay on the job on the basis of good working conditions. So, in order to ensure that the organisational knowledge (both tacit and explicit) that is held by individual members of staff is kept within the organisation and is used to further the organisation’s objectives, employers have to pay particular attention to the issue of the employees’ job satisfaction.

### 4.6 Staff development

There is no policy on how journalists can build their capacities or learn new skills during their employment tenure at the Zimbabwe Mirror. Previously, the organisation used to hire a consultant editor to train junior staff on such issues as house style and networking. However, owing largely to the expenses involved and the non-availability of time, the training programme was scrapped, depriving journalists of valuable mentoring opportunities. Nevertheless, some journalists do attend ‘refresher’ courses that are occasionally offered by institutions such as Media Institute of Southern Africa (MISA), Zimbabwe Union of Journalists (ZUJ), and Institute for the Advancement of Journalists (IAJ). These are sourced personally by the journalists themselves via formal and informal channels such as email listservs, NGO networks and the WWW. However, this has had its downside. For example, some journalists have run into trouble for attending courses which the management felt had nothing to do with their everyday practice.

#### 4.7 Diary meetings

Diary meetings at the daily newspaper are held every morning at 08.30am. Every member of staff are expected to be punctual and latecomers are

given a written warning by the news editor. The diary meeting for the weekly edition is held twice per week; on Tuesdays at 9am to decide which stories are to be covered during the week, and also on Saturdays at 12pm to discuss the focus for the coming week. Both these meetings last for anything between an hour and an hour and-a-half.

In both the two newspapers' meetings, story ideas are brought up by the individual reporters and a discussion usually ensues regarding of the 'angling' or slant of the stories. In addition, it is during these diary meetings that story ideas are 'killed' or developed, thereby providing a daily (or weekly) learning process for all journalists on how to cover assignments. It is unacceptable for the news organisation to miss a story that is covered by a competing daily or weekly newspaper. This is an unwritten policy in the organisation and often manifests itself at the diary meeting when senior editorial staff take issue with the beat reporters about missing out on a big story which is covered by rival newspapers. In the afternoons (especially at the Daily Mirror), something akin to a diary meeting is usually held to discuss the lead story for tomorrow's newspaper. This meeting, however, is usually only attended by senior editorial staff, and occasionally, by the journalist who wrote the lead story.

## 4.8 The Library

The Zimbabwe Mirror's library is not easily accessible from the newsroom as it is located four floors above the newsroom. Information stored in the library includes old copies of both the Daily Mirror and the Sunday Mirror, and other local and regional newspapers. Other materials available in the library included press releases from government departments and brochures from parliament and other public institutions. A quick glance revealed that there were no reference materials and books (like dictionaries, country maps, etc)

available. At the time of conducting the research, the organisation was searching for a new librarian as the former librarian had resigned. An intern was doing the press clippings under the guidance of the advertising and marketing managers, who rarely supervised her. In addition, none of the journalists interviewed said they had used the library in the past one month. Some professed ignorance of the availability of press clippings in their library. They said they preferred to use a rival newspaper's library, the government-owned Herald, which is about one kilometre away from the Zimbabwe Mirror offices. Some also said they used the library of the government-owned news agency ZIANA, which is a few kilometres further away from the Herald's library.

## 5. Use of ICTs to generate, store and transfer knowledge

Knowledge management involves the capturing of both explicit and tacit knowledge. Information technology advancements have meant that it is now easier to store and retrieve information on technological devices such as computers, mobile phones than before (Godbout, et al., 1999:9). Technological devices at the disposal of the Zimbabwe Mirror journalists for gathering and disseminating information include computers, mobile phones and satellite television. In addition, the organisation has access to the internet and uses its server to maintain an intranet and its two websites. This following section focuses on the uses of technology for knowledge management at the Zimbabwe Mirror newsroom.

### 5.1 The networked computer system and workflow system

Most of the information on how knowledge is managed at the Zimbabwe Mirror was generated from studying the newsroom processes and copy flow. This entailed outlining the stages a story goes

through from its conception as an idea, through its write-up, publication and distribution.

There are only seven computers in the Zimbabwe Mirror's newsroom - a sign of serious under-investment in technology. Of the seven computers, four were for use by staff for the Daily Mirror, while the rest were for the Sunday Mirror. Even so, staff at the Daily Mirror felt disadvantaged as they had more staff than their sister paper, meaning that their person-to-computer ratio was higher. However, staff at the Sunday Mirror also said that before the consolidation of the newsroom, they had more computers than the four currently allocated to them. Judging from the above, it can be argued that the consolidation of the newsroom has had a negative impact on morale of both publications' staff. Staff interviewed estimated that the current computers represented 25 percent of the total required to serve the newsroom efficiently. As a result, some reporters had resorted to using the news editor's computer in the adjacent office. This, however, also affected the news editor's schedule as it meant he often had to wait while the journalists finished writing their stories.

The Daily Mirror and Sunday Mirror news editors can best be described as a 'hands-on men' as they personally assign stories to reporters, monitor their progress and even assist in sharing information/stories between the two publications. Stories that are typed in the newsroom computers are saved in the news editors' folder, labelled "Pending", which is accessible to everyone (due to the shortage of computers, reporters at the daily edition have to hand in their stories at 12 noon at the latest). After going through the individual stories, the two news editors indicate that they have seen them by passing them on to their respective deputy editors and the editors, who also indicate that they have gone through them by affixing their initials and time stamps on them before they are sent back to the deputy editors. The deputy editors

then allocate the stories to the different pages of their respective newspapers. To achieve this, they manually move the stories from the "Pending" folder and put them in a page-numbered folder within the same network. This means that sub-editors can now access the stories. Sub-editors usually check the stories for structure, spelling, and grammar; afterwards they then create appropriate headlines for them, after which they layout all the stories on A4 pages. These pages have to be forwarded back to the deputy editors who have to approve the final layout of the newspaper. After approval, the dummy copies are then taken to the proofreaders' desk for final corrections. The stories that are approved by the deputy editor and editor are also passed on to the IT department for publication on the web. I noticed that stories that are cut as a result of lack of space in the print edition can be found in full in the online edition.

Although I noted that there was a strict rule that a story cannot be changed by a reporter after it has been submitted to the news editor (unless if he/she is specifically asked to provide additional information), it was quite easy for journalists to access and change their stories after their work had been edited (although, of course, no one seemed to want to do this). Further, I noticed that stories that were rejected were deleted entirely from the system, although this too seemed haphazard. For example, although the person who was responsible for deleting any stories was the deputy editor, I noticed that reporters were able to withdraw rejected stories from the "Pending" folder before they were deleted so that they could re-work them and hand them in again the next day. Discussions with journalists in the newsroom revealed that one did not need any password or unique username to access the computer network where the stories were kept.

## 5.2 Email

There is an intranet email system which allows staff to have email access (via Microsoft Outlook) to communicate internally and externally using the [zimmirror.co.zw](http://zimmirror.co.zw) server. However, staff indicated that they never used this email system for business and personal communications because of security concerns, and also because of the fact that it could not be accessed when one was not within the Zimbabwe Mirror offices. Even management preferred to circulate physical memos to staff for internal communications. One reporter said he used the email system only to receive press releases and statements from sources. Some staff saw the failure by the IT department to standardise the allocation of usernames and email addresses as a turn-off. They pointed out that any member of staff can choose any format for their username, making it virtually impossible to identify staff by their usernames. Thus, most people resorted to using web-based personal accounts such as yahoo and hotmail. This failure to utilise available resources provided by ICTs presents serious limitations in way that the organisation conducts its business and manages its knowledge. For example, an obvious disadvantage of using physical memos to call for meetings, etc., is that some members who may be out covering a story may miss the message contained therein as, most of the times, the memos are not addressed to anyone in particular, but are circulated randomly in the newsroom and during diary meetings. There is no common notice board for staff notices and internal memos.

## 5.3 The website

The Zimbabwe Mirror websites ([www.zimmirror.co.zw](http://www.zimmirror.co.zw) for the Sunday edition, and [www.dailymirror.co.zw](http://www.dailymirror.co.zw) for the daily edition) have vast archives which some journalists said they used regularly when covering stories. The archive date back to

February 1998. Journalists pointed out that the online archive is more reliable than the physical clippings that are kept in the library because the library's policy is that stories that are challenged as inaccurate by members of the public are removed from its physical archives.

Although there was a general preference for online archives, staff members interviewed revealed that they had limited access to them, owing largely to the shortage of workstations in the newsroom. In addition, access to online archives was difficult in that they did not have a search feature, making them virtually unsearchable. However, some journalists got round this by typing the date of publication of the stories they were looking for (as far as they could remember them) in the website's URL to get the issues of the publications they needed. Further, there seemed to be no clearly laid-out policy on the updating of the website in terms of which stories to publish online and which ones to leave out, etc. I only managed to observe that it was the IT department that updated the site. This was done anytime in the day, but only after the print editions have gone on sale in the streets.

## 5.4 Telephones

The telephones in the newsrooms are only 'extension' lines which can only be used for internal communication between the reporters of the two publications. All external calls are centralised and have to go through a switchboard system which is located at the reception area. This system can be a headache for journalists especially during peak hours, where incoming external calls have to compete for attention with internal calls. Some journalists told me of incidences where some sources could not get back to them because of the fact that their telephone lines were always busy. I observed that, as a result, most journalists preferred to arrange face-to-face meetings with sources as this was sometimes faster than trying

to join the telephone queue at the reception.

## 5.5 Mobile phones

The Zimbabwe Mirror does not supply its journalists with mobile phones and SIM cards (which are scarce in Zimbabwe) to use during the execution of their duties. Only senior editorial staff are provided with a mobile phones, for which the organisation also pays the bills in full. While the organisation provides both the SIM card and a basic handset to senior editorial staffers, most normally prefer to use their own more 'advanced' handsets. This is problematic because it means that some end up treating the phones as their personal property, making it impossible for junior journalists to use them on instances when they have to contact sources by phone urgently.

## 6. Existing and missing knowledge

The basic forms of knowledge identified as existing among journalists were mainly those that they needed for executing their duties and these included: a working knowledge of the English language; computer literacy (especially word processing programmes); time management skills, and a working knowledge of local and international current affairs. Some reporters also cited knowledge of senior editorial staff's personal tastes and habits as knowledge that was necessary for an individual journalist to succeed, i.e. ensure that they covered stories that were relevant. For example, some reporters complained that their stories were sometimes not published because some senior editorial staff were friends or relatives of individuals implicated in their stories. Therefore, they argued, it was necessary to know the personal and political inclinations of the editors before they could embark on covering some stories.

In order to supplement their access to current affairs, journalists at the Zimbabwe Mirror are

obliged to read other newspapers and listen to the radio. In addition, the newsroom is equipped with a satellite dish to access international channels via Digital Satellite Television (DStv). However, during the time of the research, subscription for the pay channels had not been paid and this meant that the journalists had to resort to watching free channels which had little or no relevant content at all. This meant that the internet and other newspapers available in the country are the only means for accessing international current affairs - although of course, this was difficult as well in the case of the internet, owing largely to the shortage of workstations and the poor connection.

## 7. Gaining a competitive advantage using knowledge

Knowledge management theory argues that that an organisation's intangible assets such as knowledge are key to gaining a competitive edge over competitors (Sveiby, 1996). For news organisations, this 'edge' comprises of the organisation's ability to produce content which is both accurate and unique (Quinn, 2002:18). From the information I gathered, it seems that the Zimbabwe Mirror has had some difficulty in ensuring that the content it produces is kept within the organisation. One senior journalist revealed that the organisation has endured leaks in crucial stories to rival newspapers and, in all the cases, the sources of the leaks could not be pinpointed. For example, in one incident, the local Herald carried a story which was a rebuttal of a story that the Daily Mirror was due to publish the next day, in an attempt to preempting any claims the Daily Mirror story would have made in its story. In yet another incident, an online Zimbabwean newspaper based in the UK, [www.newzimbabwe.com](http://www.newzimbabwe.com) published a story that was attributed to the Zimbabwe Mirror, yet the said story was never published by any of the Mirror titles (both print and online). It latter emerged that the story was due for publication in the Daily



Mirror the next day but had to be dropped in the last minute because of its political sensitivity. It also emerged that there was also a possibility that some senior journalists within the organisation were doubling up as correspondents for foreign newspapers and news agencies, using the Zimbabwe Mirror's resources and time. Although none of the journalists admitted to this practice, it was clear from my discussion with some editorial staff that the practice was prevalent. The organisation does not have a written policy to prevent journalists from writing or leaking information to other publications to maintain its competitive advantage. Although the practice is discouraged informally, no steps have been taken by the organisation, for example, to introduce unique usernames and passwords for staff when they want to use the intranet, as this would enable the IT department to monitor the movement of content. Using unique usernames and passwords to access the network would also cultivate a sense of responsibility in handling crucial organisational information such as yet to be published 'scoops'.

## 8. Recommendations

KM policies should be geared towards ensuring that an organisation gets the best out of its limited resources, be they intellectual, informational or infrastructural. There is a clear under-investment in ICTs at the Zimbabwe Mirror despite indications that most of the staff at the organisation are computer-literate and have a high level of awareness of the advantages of technologised systems for knowledge generation, codification and transfer. It is my first recommendation that the organisation invests in ICTs in order to fully benefit from the highly skilled human resources that are at its disposal. This would entail the provision of basic workstations in the first instance, including access to internet and email, as well as the provision of mobile telephony. Journalists must be required to store contact details of their sources in the news-

room computers for common access, run diaries and communicate through the network system which is already in place.

The "Resources" folder in the network can also be used to house contact details of sources and other newsmakers that individual journalists can use when covering assignments. The email system has to be revamped and standardised in order to ensure the free flow of information, both within and outside the organisation. Generic email addresses (for example, s.weza@zimmirror.co.zw) should be used for all journalists and be published at the end of all stories with by-lines so that it is easy for outside sources to contact journalists. In addition, investment in telephone and mobile phone communication ensures that journalists are able to collect their information quickly and relatively cheaper, thus ensuring that the organisation produces timely content.

Priority must also be given to the library. First, the library needs to be revamped to enable it to systematise the storage and retrieval of the organisation's information. This would entail allocating more physical space for the library than the current one room which it uses. Secondly, press clippings have to be indexed properly and photos captioned and then stored in box files in either alphabetical (or numerical) order or by subject/genre. Clippings can also be scanned and saved electronically, which makes for easier indexing and searching. In addition, the library must also keep records of all the brochures, information packs, books, tapes, CDs, and DVDs, etc. that it receives. These can be loaned out to staff on request but a proper system needs to be put in place to ensure that they are returned on time. Some journalists interviewed during the study complained of missing books and other material in the library, arguing that some senior staff 'borrow' library material which they never return. The library's limited use by journalists is testimony to the fact that, with the



way it is being managed, it serves no purpose at all.

Thirdly, lack of clear-cut policies on staff development has a negative impact on staff morale and as I have argued above, this eventually comprises the quality of knowledge that the organisation produces. The organisation needs to adopt a policy on staff development that prioritises acquisition of new skills within and outside the newsroom. This will ensure that the organisation gets the best from its employees and it may work to ensure that it stays ahead of its rivals in the business.

The consolidation of the two newsrooms is a positive development that needs to be followed by appropriate systems of generating and transferring knowledge among staff. The interaction of staff of the two newspapers needs to be enhanced. The success of knowledge sharing in business is not only technological but also related to behavioural factors (Ahmed et al., 2002:13). The organisation needs to create an incentive system that motivates staffers to share their knowledge positively and voluntarily (Liao et al, 2004; Ribiere and Sitar, 2003:40). The organisation can use the opportunity provided by frequent informal interactions between its journalists to foster an organisational culture of knowledge generation and sharing.

Another recommendation is that the organisation must draft an induction manual to complement its editorial stylebook, which gives information to staff about some of the policies and procedures to handle unpredictable events and how to go about their general tasks. This manual may not capture everything in the first instance, but it is a step in the direction of ensuring a culture of knowledge sharing and management

Given the limited technical resources available, the organisation can also explore ways of using other manual knowledge management tools such as

flow charts and a centrally located notice board to disseminate general information about developments within the organisation. Process manuals, flow charts, blue prints and procedures are commonly employed in organisations to capture the practical knowledge of the organisation (Bou and Sauquet, 2004). This is helpful particularly as an induction technique for new employees.

## 9. Conclusion

The paper focused on the newsroom process flows within Zimbabwe Mirror, including its KM practices, with a particular emphasis on how policy impacted on ICT integration into these practices. It concluded by arguing that there is a serious under-investment in ICT tools within the Zimbabwe, and coupled with lack of clear policies, the organisation's KM system is weak. Recommendations were thus made to the effect that, beginning with investing in basic ICT hardware, the organisation can take advantage of its unique shared newsroom set-up to encourage knowledge sharing and transfer. It was also recommended that organisation needs to urgently overhaul its library system, where the bulk of the Zimbabwe Mirror information resides, to ensure that it is user-friendly and accessible to journalists.

## Footnotes

<sup>1</sup> Both newspapers will be collectively referred to as "the Zimbabwe Mirror" throughout the report, unless where specifically stated.

# Chapter 2:

## Zimbabwe Independent, Zimbabwe by Rashweat Mukundu

### 1. Introduction

This chapter seeks to contribute to the body of knowledge on how African newsrooms are utilising information communication technologies (ICTs) to produce and manage information and knowledge, with particular reference to the Zimbabwe Independent. It is an attempt, therefore, to outline the processes of knowledge generation, codification, transfer and storage in the organisation, and also to provide a description of the knowledge management system (KMS) existing in the organisation, with a view to providing recommendations that may improve the way the organisation operates. African newsrooms face many hurdles, some internal and others external, in coming up with policy strategies that seek to maintain their relevance to their societies, while at the same time being at the forefront of technology use and adaptation. The chapter outlines the levels of technology use within the Zimbabwe Independent newsroom, including an analysis of the organisation's internal policy interventions in the area of knowledge management and ICT usage.

### 2. Background to the study

The Zimbabwe Independent is a weekly publication owned by ZimInd Publishers, a private publishing house controlled by Trevor Ncube. It publishes every Friday. ZimInd Publishers also owns The Standard, a tabloid newspaper that comes out

every Sunday. The owner of ZimInd, Trevor Ncube, also owns the Mail and Guardian, one of the leading newspapers published in South Africa.

The Zimbabwe Independent is one of the few remaining alternative newspapers in Zimbabwe after the closure, by the government, of four other privately-owned publications within a space of two years<sup>1</sup>. The newspaper is an interesting choice for this study, as its operations are always under constant surveillance by government security agents, with the newspaper already having received several letters of reprimand from the government-appointed Media and Information Commission (MIC), and most of its journalists arrested over various charges under the draconian Access to Information and Protection of Privacy Act (AIPPA). The hostile legal and political environment under which the Zimbabwe Independent operates means that the newspaper undergoes unique newsroom processes and routines, both in order to survive, and in order to produce quality news products.

### 3. Methodology

The study was carried out over a period of four months (April to July 2005), and the bulk of the information collected on the operations of the Zimbabwe Independent was through a combination of observation and semi-structured interview

techniques.

Five newsroom staff, as well as the librarian and Chief Executive Officer (CEO), were interviewed. These included the editor, the news editor, the chief sub-editor, one senior reporter and one junior reporter. All the interviews were conducted in situ for purposes of easy practical demonstrations of issues that the interviewee would be explaining. The different respondents were asked specific questions relating to different roles they play in the organisation. Those issues that were not well-explained in the interviews (or were not clear to this researcher), were referred back to the interviewees for further clarification via email.

Structured questions were prepared in advance and sent to the interviewees so that, where possible, they could prepare for the interviews beforehand, and seek explanations on questions they might not have understood. At least six hours, spread over two weeks, were also spent observing the operations of the newsroom and through informal talks with the journalists and editors. The Zimbabwe Independent website was also monitored for a period of five weeks. Some of the questions on the operations of the website, its weaknesses, etc., were informed by this monitoring.

### 3.1 Problems encountered

The area of ICTs and knowledge management (KM) seems not to be so well-grounded at the Zimbabwe Independent. Although most of the work done in the organisation involves the heavy use of ICTs like personal computers (PCs), mobile phones and the internet, most of my respondents seemed to regard these simply as tools of the trade rather than tools with which the organisation could manage the knowledge that it generates on a weekly basis. It was thus a bit difficult to elicit information on the relationship between ICTs and KM and, as a result, many of my questions were preceded

by background explanations on the connection between the two.

As for observation as a tool of gathering data, I realised towards the end that while I was able to observe the general routines of the Zimbabwe Independent newsroom within the time I set aside for observation, this was not enough to gauge the depth of what really took place in the newsroom on a daily basis. One would need at least a month or so of consistent observation to be draw a comprehensive picture of the operations of the Zimbabwe Independent.

## 4. Analysis of findings

The Zimbabwe Independent has a weekly print run of 25 000 to 30 000. However, while statistics show that a major part of the newspaper's readers access it from the internet – 4 430 from within Zimbabwe and 33 483 from outside Zimbabwe – not much revenue is generated from the organisation's website<sup>2</sup>. The economic scales are heavily tilted in favour of the print copy, which advertisers seem to trust more for reaching their target market. This leaves the paper concentrating on where most of its revenue comes from, that is, the print version. It is noted, however, that investing in multi-channels of content distribution in partnerships with, for example, those in the mobile phone business might bring some additional revenue for the organisation. However, this option has not been explored yet.

### 4.1 Editorial policy and house style

The Zimbabwe Independent has an editorial stylebook and a booklet on the code of conduct for employees, both which are kept in the newsroom as hard copy. The stylebook contains basic information about the organisation's in-house writing style, for example, information on how the newspaper writes figures, i.e. 6 million instead of 6, 000 000.

However, I noticed that a few journalists consulted both the stylebook and the organisational code of conduct on a regular basis. The stylebook, for example, which is supposed to help journalists when writing their stories, is hardly used. As a result, a lot of time is spent by the senior editorial staff subbing the copy to make it comply with the newspaper's house style. This is exacerbated by the fact that the organisation's house style has not been integrated into its computer network, meaning that its application depends on the individual journalist's ability to master it. Further, there is no written policy on what happens to reporters who continuously flout the rules of stylebook.

Stories at the Zimbabwe Independent are verified through a system adopted from the Sunday Times newspaper of South Africa. This guide is available in a physical format. However, journalists revealed that while the guide was helpful for controlling the quality of the Zimbabwe Independent stories, it was also very difficult to implement in practice. For example, it states that all stories must have at least three sources. "The rule, however, cannot be applied dogmatically and it is left to the discretion of the senior editorial staff whether a story can go through with one source. For example, a story that is purely based on documentary evidence can be passed with the documents as the only source cited," said Dumisani Muleya, the news editor<sup>3</sup>.

## 4.2 Diary meetings

A normal work week at the Zimbabwe Independent officially starts on Monday at 10am where a diary meeting is held to discuss story ideas. This meeting is attended by the entire newsroom staff, including intern reporters. Each reporter presents his/her story ideas to the news editor, and advice on angling and on which people to contact is given. Viewed this way, it can be argued that this meeting is a platform to share organisational knowledge and expertise within the newsroom.

According to the editor, the idea is to foster open dialogue during which everyone gets a chance to speak. Journalists interviewed said they felt empowered by the diary meeting process as it allowed them the chance to say what they think. Journalists revealed that they constantly face the challenge of differentiating between what they know as individuals and how they can turn this knowledge to a news product that is of monetary value to the organisation. One reporter said: "you might know everything about an organisation such as the Zimbabwe Electricity Supply Authority, its management structures and how electricity itself is generated, but never be able to write a single story about that organisation"<sup>4</sup>. The diary meeting, he said, is one such process through which one is given advice on how to turn ideas into stories.

In the meantime, the sub-editing and design team would have already started laying out most of the newspaper's regular features, like columns, opinion pieces and letters to the editor, which would have been arriving throughout the week, mostly via email<sup>5</sup>. On Wednesdays, the newsroom staff meet again to have a re-look at the diary and to decide which stories are likely to be developed on time for publication. This meeting also allocates the stories to their pages. The news editor keeps a hardcopy slug sheet that indicates stories that have gone through and those that are still being worked on. The meeting also looks at other media events that would have happened during the week that may merit coverage. According to Muleya, this meeting is "very important as it is a more accurate estimation of how the newspaper is going to look like when it comes out on Friday"<sup>6</sup>. The Wednesday meeting is also followed by a meeting on Friday afternoons, when the paper is out, to review the week's edition and make comments on how to improve on it.

### 4.3 Description of stages of copy flow

Once reporters have gone to the field and collected their data, they write down the stories and send them to the news editor via the intranet. The newsroom has a standardised language of codes that is used to save all stories. These codes include, among other things, the use of initials to identify the author of a story and whether a story is for business pages or general news. The newsroom operates on two platforms: reporters have PCs, while sub-editors have IMacs.

The news editor looks at the quality of the story in terms of language use, grammar and sourcing, and liaises with the reporter to improve where necessary. Those stories that do not make the grade are kept by the news editor who confided that some are re-worked and published in instances when the week is “dry”. Those that are approved are passed on to the assistant editor who checks them for their length. Thus, he might request that a story be cut to a certain size, or that more stories are written, depending on the space available for editorial content. After this, the assistant editor sends the stories to the chief sub-editor, who immediately begins lay out.

The Zimbabwe Independent newsroom is equipped with 12 workstations (PCs), all of which are installed with InDesign software and are networked to each other via a local server. All newsroom staff said this system makes “life easier”, as the news editor can access finished stories directly from the system without having to use floppy disks, as was previously the case. The editor feels that the new system has gone a long way in reducing the amount of paperwork in the office, as well as reducing the time spent on editing copy. For security reasons, the network system is password-protected and is only accessible to senior editorial staff. This is meant to ensure that finished stories are not changed or tampered with

once they have been approved for publication.

After lay out, a dummy copy of the newspaper is printed and sent to the editor and the group projects editor, who check them for quality in terms of sourcing, and the presence/absence of defamatory statements. The group projects editor can be said to be an “outsider” in the newsroom, who checks the stories for quality, factuality and language and sends his comments directly to the chief sub-editor. However, in some instances, he might also communicate with the editor if there is a serious problem with the factuality of a story, or if there are defamatory statements in a story. Afterwards, the edited dummies are sent back to the chief sub-editor for final corrections and then new dummies are printed out for the editor’s final approval and signature before they are sent for film production (image-setting) and then to the printers. The Zimbabwe Independent has the advantage of having its own image-making machine and this enables the organisation to send printer-ready film to the printers, thus cutting down on costs.

The sub-editors often liaise with the advertising department and the typesetters on the space that is available for editorial. Only the lead page has a dummy that is not changed on a regular basis as it has limited space for advertising. Despite the fact that much of the work in the newsroom is passed around electronically, the relationship between the sub-editors, the typesetters and the advertising department is still dominated by a lot of physical paperwork, as these three departments are not connected to each other via the local network system.

### 4.4 Sources

The Zimbabwe Independent encourages the sharing of sources among journalists as recognition that the process of newsgathering is heavily

based on accessing the right sources. The editor, however, revealed that most journalists are loathe to share their sources with others in the newsroom, as they consider it a breach of trust and confidentiality. “Individuals have sources and not the organisation,” argued the news editor. “If the individual leaves the Zimbabwe Independent today, they often leave with their sources”, he added. The CEO, while noting the importance of sources to the organisation, says there is not much the organisation can do to retain the sources as these belong to the individual journalist who cultivated them in the first place<sup>7</sup>.

In order to encourage the sharing of sources and to lead by example, the editor said he has had to introduce many junior reporters to his own sources. The news editor noted that this has to be actively encouraged, especially for junior reporters, whom he said they needed a lot of assistance<sup>8</sup>. However, practice on the ground revealed that most journalists kept their source contact details to themselves in their personal mobile phones and notebooks. A junior reporter interviewed during the study, however, said that keeping one’s source details in one’s mobile phone is risky since a mobile phone can be lost or stolen. However, during the time of conducting this study, there was no system in the organisation to back up data that is held on mobile phones.

## 4.5 Induction and mentoring

The news editor is the one who does the orientation and induction of new reporters into the organisation, and this usually involves finding a workstation for the reporter, giving them the organisation’s stylebook, and explaining other general rules and procedures in the newsroom.

The Zimbabwe Independent uses its internship programme to identify talented journalism students for future full-time employment. The

intern reporters’ performance is used to gauge their interests in the field, and this information is then used to help develop them in their particular area of interest. For example, if an intern reporter regularly hands in stories that are categorised as political news, the news editor uses the opportunity to probe them on how much they understand the fundamentals of the subject they write about. He revealed that, for example, he probes them on their understanding of how the state in Zimbabwe is organised, what the constitution says, the organisation of political parties in country, and any other big issues on the political landscape of the country. This often helps to improve the journalists’ work. For example, one reporter revealed to me that the news editor’s personal interest in his work has worked to add depth into his stories and has turned him into a better journalist. He added that as a junior reporter, one is often not aware of the value of a story but the senior editorial staff often help by suggesting new angles, which can turn an ordinary news story into front page material.

## 4.6 Monitoring and evaluation

After all diary meetings, the news editor prints out the list of the ideas that have been discussed and gives a copy to all journalists, including the editor and the chief sub-editor. He then keeps a copy of each reporter’s diary items and checks at the end of each week to see if all the items diarised were followed up. The editor, for his part, also uses the diary records to create a manual grid (see illustration below) on a spreadsheet into which he enters the journalist’s name, the number of proposed stories and the number of the stories actually handed in, including details about which page they appeared in. This, he said, makes it easier for him to monitor the overall contribution of individual reporter to the organisation.

Date	Name of Reporter	# of Diarised Items	# of Stories Handed in	# of Published Stories	Title of Published Story (ies)	Page #	Comments
#####	Joe Bull	6	5	2	1. Mugabe to go 2. Weah sick	2	Stories came late
#####	Jane Smith	2	2	2	1. Moyo on win 2. Riding high	1	By-line

*Fig. 1 (Dummy monitoring chart used by the Zimbabwe Independent news editor)*

However, he also said that the monitoring system has to go beyond looking at the number of stories written by each reporter and their location within the newspaper, because at face value, it can be highly prejudicial, especially in favour of political news reporters<sup>9</sup>. This is because political news always makes front page material, whilst other stories like entertainment and business news can be found buried in the inside pages of the paper. In addition, feature writers may never make front page with their articles but their contribution in the newsroom is still invaluable. He thus said that there is a need to train line editors within the newsroom on how the monitoring system works.

He further said that the lack of a co-ordinated approach to the monitoring system is a major problem, as it leaves the organisation none the wiser, especially in determining the training needs of staff. It becomes necessary, therefore, to be more serious with the weekly appraisals as these eventually inform the organisation's end of year reward system and promotion decisions. All reporters in the newsrooms are aware of the monitoring system and are always informed of the results. Although the editor co-ordinates the system (being his personal initiative), the news editor and the

assistant editor also make various input on the forms (especially the comments), since they work closely with the reporters in the newsroom.

## 5. Use of ICTs to generate, store and transfer knowledge

Journalists in the Zimbabwe Independent have at their disposal various ICTs to conduct their day-to-day work. These include workstations, mobile and fixed phones, fax and internet. With the internet, however, it was revealed to me that most had to learn using it as a tool for gathering information on their own, as the organisation does not provide training on the effective use of the internet as a data gathering tool. It was also indicated to me by the chief sub-editor that while other departments, like the sub-editing department, provided training opportunities for their staffers, journalists in the news section relied on attending personally-sourced courses from international training organisations such as the Institute for the Advancement of Journalism (IAJ), InWent, and the Nordic-SADC School of Journalism (NSJ) to further their skills.

A result of the lack of co-ordinated training programmes in the organisation is perhaps illustrated

by the stark differences in the levels of computer literacy between members of staff. For example, the chief sub-editor said that the lack of appreciation of the value of mainstreaming ICT usage in the newsroom means that decisions concerning the website or any technology-based issues usually take long to be passed. For example, she revealed that it took the organisation three months whole months to authorise the buying of a flash stick for her section as senior management could not understand why such a small thing should cost so much. This has had an adverse effect in the workflow system, as she further revealed that for example, after the lay out process, the sub-editing department has to print out hard copies of the pages to give to senior editorial staff for approval, since most of them are not familiar with the software that is used for lay out. She complained that this is tedious and is akin to a duplication of duties since after each editor has made corrections on the printed dummies, the designers have to transfer the changes onto the electronic version. Further, I observed that even after the pages have been passed to go to the printers, these are taken there as hard copy by a driver. The driver then has to stay overnight at the printers to monitor the printing. The chief sub-editor said it would be more convenient and cheaper to copy the pages onto compact discs (CDs) or flash sticks.

## 5.1 ICT tools

Although almost all journalists at the Zimbabwe Independent have mobile phones which they sometimes use for collecting data and phoning sources, the organisation does not pay for their bills, except for senior editorial staff, whose bills are also only partly taken care of by the organisation. Thus, while most journalists recognised the value of mobile phones, they admitted to using them only when it was necessary, owing to costs involved.

I also observed that the further up the organisa-

tional hierarchy one went as a staffer, the more access you had to information technology gadgets. For example, the editor has access to a paid-for mobile phone, 24-hour internet access, internal email, a private laptop, a flash stick, a Reuters terminal, digital satellite television (DStv) and an InDesign CS server system. At the lowest level, journalists are only provided with access to a public workstation, internet, floppy diskettes, and DStv. Journalists decried the lack of access to some of these facilities, arguing that they were concentrated on people who did not have much use for. For example, they argued that it is them who really should be having laptops, which they can use to write stories while in the field.

## 5.2 Internet

Every computer in the newsroom is connected to the internet, and the organisation uses a radio link, which ensures better connectivity than dial-up connection, which is common in Zimbabwe. Although the organisation currently has no internal email system, the editor revealed to me that this is being worked on and an intranet would be up and running “soon”<sup>10</sup>. At the time of conducting this research, however, most journalists relied on web-based services such as yahoo to send and receive email.

Zimbabwe Independent journalists said they visit several websites on a daily basis to check the latest online news about Zimbabwe. Popular sites in the newsroom include UK-based portals and newspapers like [www.newsnow.co.uk/zimbabwe](http://www.newsnow.co.uk/zimbabwe), [www.zwnews.com](http://www.zwnews.com) and the South African-based [www.zimonline.com](http://www.zimonline.com). This, according to one reporter, assists with story ideas that might need to be followed-up, and also in checking whether a suggested story idea has not been covered already by other publications<sup>11</sup>. Journalists also said the internet offered quality background information for their stories, as some of these websites have



good archives. However, the editor felt that there is still a need to teach journalists how to use the internet effectively as most have only rudimentary knowledge how to use it, especially on issues about plagiarism and intellectual property. There are, however, no specific policies that have been initiated by the organisation to this end.

The Reuters terminal, which can be found in the editor's office, is also another major source of online information at the Zimbabwe Independent. The major advantage of the terminal, according to the editor, is that its stories also carry with it quality photographs which the organisation usually uses for its international news section. The DStv facility which is located in the newsroom is also another way of following international events as it includes several international news channels such as BBC, CNN, Sky News and SABC Africa. The facility, however, does not have a video cassette recorder, which means that some top international stories cannot be recorded for later analysis.

### 5.3 The website

The Zimbabwe Independent newsroom has two distribution platforms; the print copy and the website, [www.theindependent.co.zw](http://www.theindependent.co.zw). However, the uploading and design of the website had to be outsourced to an IT consultancy called Cyberplex, since the organisation did not have qualified personnel to do it. Cyberplex also uploads the website every Friday morning. From the Zimbabwe Independent, the chief sub-editor also doubles up as the online manager as she is the one who is responsible for updating the pages every Thursday evening (at the same time that the print edition is going to print). The updating system is manual – she has to copy and paste the stories from the newspaper dummies onto the web templates designed by Cyberplex. She also has to check all stories for accuracy, i.e. that each has been loaded under the right author, and column, etc.

After updating the pages, she has to take them physically (by a flash stick) to the Cyberplex offices so that uploading will start on Friday morning. The uploading normally takes up to two hours, which means that the newspaper is only available for local readers late on Friday afternoons.

For the readers who are outside the country, Cyberplex creates a mirror site of the original website, which is accessed via the same URL. Readers, however, have often complained that the mirror site sometimes fails to open, and when it does, it is too slow. In some instances, stories appear under the wrong categories and pictures fail to load. As a result, the chief sub-editor has to spend the whole of Friday afternoon going through the website to make sure that all stories have been uploaded correctly. This means that the chief sub-editor she is doing two jobs at the same time, and this needs to be rectified by the recruitment of an online editor.

Cyberplex is also mandated with the task of monitoring how readers use the Zimbabwe Independent's website. This enables the organisation to know which stories, columns and sections are popular with their readers. This information is then used to improve the website and make sure that popular columns are maintained. According to one of the evaluation reports, many readers visit the website on Fridays and Saturdays and the traffic begins to taper down as the new week begins. This is largely due to the fact that the site is updated only once a week, a situation which is said is going to change with the appointment of an online editor. According to the organisation's CEO, plans are at an advanced stage for the appointment of an online manager for the website. The online manager will also be responsible for putting in place a subscription service which will produce exclusive stories for online readers way before they are put into the print version.

The proposed subscription service is also going to be complemented by the production of a digital copy of the newspaper, which will be sent to subscribers via email. The digital copy, a PDF-based newspaper, will be an exact version of the print edition, with adverts and all the stories as they appear in the print. As it stands, however, the Zimbabwe Independent has failed to generate any substantial income from its website, owing largely to scarcity of advertising, exorbitant prices charged by internet service providers (ISPs), and the general economic meltdown that the country is facing. Thus, the editor observed that, for now, the organisation is running the website merely as “a community service” than an income generating venture.

## 6. Library

The Zimbabwe Independent's library is a manual affair, with newspaper hard copies and photographs being kept in raw form in one room. The editor revealed that the organisation's library is accessible to journalists from other news organisation and to the public in general free of charge because most libraries in the country (including private ones) do not charge access fees to users.

The library's archives go back as far as 1996. However, efforts are underway to computerise it, and already some pictorial data is being stored in an electronic library being run by the chief sub-editor. Nevertheless, the chief sub-editor revealed that a general lack of knowledge on using the digital photo archives by some members of staff means that some photos are deleted “by mistake”<sup>12</sup>. This is exacerbated by the fact that the newspaper does not have a large pool of photographers and has to contract freelancers to do a lot of the photographic work for them. In addition, the library does not have any reference materials like dictionaries, country maps, statistical publications, or encyclopaedias. The news editor said he has

resorted to buying his own books since the library does not have anything else on its shelves.

## 7. Recommendations

The objective of this chapter was to carry out an assessment of the knowledge and content management systems and policies of the Zimbabwe Independent in relation to ICTs and newsroom workflow systems, with an aim of making recommendations on how the organisation can improve on these. KM is viewed in this paper as a process of not only acquiring data and converting it into information and knowledge, but also as a process that ensures that such information and knowledge be transformed into key competencies that are applied to the everyday routines of an organisation, to enable it to meet its organisational goals efficiently.

To this end, I have argued that the Zimbabwe Independent still has a long way to go in realising its full potential as an organisation whose core business is knowledge production, codification and transfer. Although the organisation has tried to take advantage of the promises that modern technological tools like mobile phones, the internet, and satellite television have in enhancing its daily activities, this has not been streamlined into the organisation's workflow system and daily newsroom routines. The workflow system still involves a lot of paperwork which is prone to duplication of duties and human error. In addition, the organisation's focus is still narrowed to producing a print copy of the Zimbabwe Independent at end of each week and options for producing content that can be repurposed in multiple platforms have not been explored, meaning that a lot of information that does not make it into the publication is often lost. During the study, interviewees acknowledged that the organisation is not taking full advantage of all its information as the print version has limitations

in terms of space. As a media organisation, the Zimbabwe Independent interacts with a lot of data in the form of economic statistics, press statements, research reports, etc., on a daily basis, which it has to convert into information that is of monetary value.

Although the organisation has a number of policies in place in relation to its editorial and house style, and staff recruitment etc., it appears as if some issues, especially on ICT usage, staff monitoring, and knowledge management are uncoordinated and largely ignored. For example, the computer system in the newsroom has not been programmed to comply with some of the basic requirements of the organisation's in-house style (for example, the use of UK English in writing stories), meaning that a lot of productive time is spent manually subbing copy to comply with the in-house style. Further, ethical issues on internet usage are monitored haphazardly and are not prioritised as a major policy issue in the organisation.

However, some of the issues are really beyond the power of organisation. For example, content distribution options via the internet are tied to wider political and national policies obtaining in the country. As an illustration, the news editor and editor mentioned to me that through the Post and Telecommunications Regulatory Authority (POTRAZ), the government has pursued a deliberate policy of limiting the number of ISPs in the country, meaning that the few providers that are actually licensed are free to charge exorbitant fees for basic services. In addition, access to high-speed internet connectivity bandwidth is not common in Zimbabwe, meaning that even if the organisation wanted to design a slick website with the latest flash technology and search features, users will not be able to access it owing to slow downloading speed. Further, the free-falling Zimbabwean economy means that investment in a multi-channel content distribution venture is a bit risky.

Nevertheless, the organisation can do a few things as well to enhance its physical visibility in the media industry in Zimbabwe. Some of these things would include a review of its website updating system. This would involve the engagement of full-time online edition staff who will make sure that the site is not only interactive (allowing for online reader feedback on stories as is the trend with many newspapers these days), but also that it has breaking news as and when it happens. This would work well to complement the organisation since its weekly print edition tends towards news analysis than hard news. A digital edition can also be produced to supplement revenue and this can be targeted to a niche market of hundreds of thousands of homesick Zimbabweans in the Diaspora.

While the Zimbabwe Independent newsroom has access to the internet, it does not have an internal email facility. With a basic intranet email service, the organisation could cut down on some of the paperwork and duplication of roles that currently obtain in the newsroom, as copy can be moved electronically within the newsroom and between the different departments in the organisation. It would also allow for faster communication within the newsroom through features like Instant Messaging (IM) and could enhance the way that journalists can collect background information for stories as they can subscribe to international news channels and portals which deliver content via email. This means that that the organisation would not have to depend on the already erratic internet connections to communicate internally.

## 8. Conclusion

The paper provided an outline of the Zimbabwe Independent's newsroom process flows and its knowledge and content management practices. Particular attention was paid on how the organisation utilises ICTs in its daily routines of collecting, writing and disseminating information. One major

finding was that there is no clear strategy on the adoption and adaptation of ICTs by the Zimbabwe Independent. This was partly explained by the general lack of policies in mainstreaming ICTs in workflow system of the news organisation. Senior editors at the Zimbabwe Independent are, however, creative in their own right and have come up with ways to enhance the use of ICT tools, albeit also on an ad hoc basis. The findings of the study paint a map of a newsroom that realises what it wants to do, but lacks the policy strategies of how to go about this. As a result the newsroom has been left clinging to what it knows best, writing stories and producing a print copy every Friday.

pendent editor (20 June 2005).

<sup>11</sup> Personal interview with Shakeman Mugari on 24 June 2005.

<sup>12</sup> Interview with Teldah Mawarire, chief sub editor (13 June, 2005).

## Footnotes

<sup>1</sup> The Daily News and The Daily News on Sunday were closed in 2003 followed by the Business Tribune and the Weekly Times in 2004. These were closed for violating the Access to Information and Protection of Privacy Act (AIPPA) promulgated in 2002.

<sup>2</sup> Zimbabwe website monitoring and evaluation report submitted by Cyberplex, covering the period 01 May to 23 May 2005. Prepared by Sharon Gwati (email: sharon@cyberplexafrica.com).

<sup>3</sup> Personal interview with Dumisani Muleya on 25 June 2005.

<sup>4</sup> Interview with Shakeman Mugari, senior reporter (24 June 2005).

<sup>5</sup> Interview with Teldah Mawarire, chief sub editor (13 June, 2005).

<sup>6</sup> Interview with Dumisani Muleya: news editor (25 June 2005).

<sup>7</sup> Interview with the Zimbabwe Independent CEO, Raphael Khumalo (30 June 2005).

<sup>8</sup> Interview with Dumisani Muleya: news editor (25 June 2005).


<sup>9</sup> Personal interview with Vincent Kahiya on 20 June 2005.

<sup>10</sup> Interview with Vincent Kahiya, Zimbabwe Inde-

# Chapter 3:

## The Namibian, Namibia

by Vincent Maher



### 1. Introduction

The purpose of this chapter is to analyse the current technical systems in place within Namibia's daily newspaper, The Namibian, and to evaluate the architecture of the current version of its website, including the levels of integration between the different editorial processes and the IT systems in order to recommend a major revision. Emphasis will be placed on the use of new media and other information communication technologies (ICTs) as necessary for the production of content for The Namibian newspaper and website. Emphasis will also be placed on the role which these play in the organisation's management systems in the creation and storage of knowledge and other informational assets.

### 2. Brief historical background

Since its first publication on 30 August 1985, The Namibian has grown into the largest circulation private daily newspaper in Namibia. Its website, [www.namibian.com.na](http://www.namibian.com.na), is currently one of the most popular websites in Namibia and, during the period from 1998 to 2001, was held as an example of innovative use of new media by a print media publication in Namibia. From 2001 to present, however, the newspaper's online presence has stagnated and relatively few new features have been added, and the website now requires a major revision of its underlying software, workflow and user interface.

### 3. Methodology

The study was conducted over a three-day period through intensive semi-structured interviews with the current Information Technology (IT) Manager at The Namibian in its offices in Windhoek, and shorter interviews with the head designer, editor and news editor of the newspaper. Interviews were followed up with conversations via email, used primarily for the clarification of data. The interviews with the IT Manager were broken into four distinct phases. The first phase was meant to establish the status of the current IT infrastructure obtaining at The Namibian, including the network structure used. The second phase focused on the website and its relation to the network infrastructure and the workflow processes of the newsroom. The third phase concerned practical technology choices for the deployment of new website and application servers within the organisation, and the final phase concerned the use of ICTs in the management of the organisation's informational assets.

The shorter interviews were intended to establish the extent to which management staff were open to a modification (or even complete replacement) of the organisation's current IT systems. Interviews with the lead designer were meant to elicit the stages of copy flow and the news production chain from the newsroom to the lay out process. This interview also discussed the newspaper's content management system (CMS), and the

website's workflow system. The interviews with the editor and news editor took the form of a discussion regarding the initial findings of the technical audit, and the possibilities for increased automation of the newsroom and improving its content and knowledge management (KM) systems.

## 4. Discussion of findings

### 4.1 Current systems audit

While this audit is accurate as of the date of completion, I am aware that several processes are currently underway to upgrade software and servers, and that a bespoke advertising management system is currently under development and will soon reach completion. The implementation of these changes will not, however, affect the outcome of the findings of this study and the proposed technology solutions as they relate to the aims of the study.

#### 4.1.1 The current role of ICTs

It was clear to me at the outset that management held a divided and slightly ambivalent attitude towards the proposal of introducing new CMS within the organisation. The newsroom and editor's office were completely filled with piles of old newspapers, to the extent that it represented a serious fire hazard. Paradoxically, The Namibian is highly recognised for its innovative use of new media platforms like the internet and Open Source Software (OSS), and some within the organisation are committed to the ideal of a paperless office. However, practice on the ground proves otherwise. This contradiction is worth exploring as it informs much of the policy-making and internal politics within the organisation, which will need to be addressed if a new CMS and KM system is to be introduced.

On 30 August, 2005 The Namibian celebrated its 20th year of continuous publication and this can only be seen as a result of the commitment of its managing staff beginning in a period before the Namibian independence and a protracted struggle for liberation from the South Africa government and its policies of Apartheid. In 2000, on the occasion of the publication's 15th birthday, it published a magazine called Free Speak that celebrated the organisation's efforts to embrace the internet as a medium for communication. In an article titled "Bridging the digital divide", Björn Staby, at the time the newspapers IT Manager and web master, stated:

It is the free flow and exchange of information that underpins the permanent presence of The Namibian on the internet... Beyond providing another "distribution channel" for the news and views disseminated by means of the daily newspaper, The Namibian's website provides a two-way communication channel and platform: from reader to publisher, from visitor to visitor, from the governed to the governors.

In the same year, The Namibian's website boasted an unprecedented amount of traffic, with approximately 60 000 unique visitors, of which an average of five percent originated from within Namibia itself. At this point, just prior to the US stock market crash that saw the end of the 'dot-com bubble', there was clearly a sense of pride within the organisation at the success of this digital platform, and the website was seen as a flagship new media product.

This attitude has changed significantly in the past five years, however. While there is still a commitment to the adoption and use of new technologies in the newsroom, this is not matched with equal financial commitment. This could be explained partly by a widespread cynicism that now exists within some about the efficacy of new media to

contribute to the overall revenue of the organisation. The failure of online advertising to generate significant income, the snowballing expenses associated with keeping up with the latest technology and staff turnover within the IT unit have all contributed to an increased conservatism towards new technology with the organisation.

The Namibian is one of the first newspapers in Africa to use OSS applications within its newsroom. This is largely as a result of two factors: firstly, the opportunity afforded by OSS to reduce costs associated with the licensing of proprietary software and, secondly, the particular strengths of the IT manager in network management and his personal interest in OSS. At present, the IT staff is focused on the maintenance of the organisation's desktop PCs, server and network management, and are in the process of designing a new website. The role of ICTs has become formalised into a business support model that could, potentially, be out-sourced to an external vendor in order to free the IT manager to pursue strategic planning and development. The sections that follow provide a more detailed overview of the current ICT deployment and its role in knowledge management in the organisation.

#### 4.1.2 ICT platforms

The current ICT configuration at The Namibian is a diverse mixture of operating systems, some of which have been obsolete for a long time though still fully functional. The primary ICT platforms within the organisation are desktop operating systems and business applications, internet connectivity and a website CMS. These complement, to some extent, analogue platforms like photo libraries and physical newspaper archives in the management of The Namibian's knowledge assets.

#### 4.1.3 Internet

The Namibian currently shares a 128Kbs Diginet internet connection with its largest competitor in Windhoek. As such, access to the World Wide Web seems slow and the connection is often unreliable. The connection is used to transfer postscript Acrobat files from the desktop publishing (DTP) facility adjacent to the newsroom to the printers nightly and, during the period of this research, this was being plagued by unexpected disruptions in the file transfer process. While it was clear that there was a problem, nobody seemed to know what the cause of the problem was, and some of the staff related this problem to the ongoing pressure by the Internet Service Provider (ISP) to upgrade the connection to a Virtual Private Network (VPN). The files in question were 9Mb in size and should not, under normal conditions, be interrupted during transfer despite the limited bandwidth available to the organisation. This type of problem is symptomatic of the general conditions of the Namibian telecommunications infrastructure and the available facilities. There is no available broadband connectivity via ADSL and the costs associated with leasing Diginet connectivity are restrictively high.

All newsroom staff have access to email and the Web, but usage patterns vary and there seems to be a relatively low level of internet usage for functions directly related to their jobs. In a few discussions with staff about the use of the internet for background research on stories, the general feeling was that the information they were looking for was not available online, or more readily available from sources contacted via telephone conversations or face-to-face meetings. The bulk of the internet use in the organisation was mainly concentrated with the editor, the news editor and the IT manager. The primary applications used are web browsers and email clients and, more recently, instant messaging (IM) applications like MSN Messenger for more direct communication.

The connectivity can effectively be classified as narrowband. The IT department uses the internet predominantly to access and download documentation and updates for its software from the OSS website. Downloads of this type are generally in the range of 100 – 640Mb in size, especially for CD-Rom disk images for software installation, and can take up to three days to successfully download if the connection is uninterrupted. It was jokingly noted that it would be quicker to post a compact disc (CD) from South Africa than it would be to download the latest Linux updates. The implications of this connectivity for the synchronisation of internal file systems and databases with public web publishing platforms are significant. With an already saturated connection to the outside world, any data synchronisation has to be extremely efficient and cannot rely on the availability of an external connection. This aspect will be dealt with in more detail in the recommendations section.

#### 4.1.4 Operating systems, software and networking

The Namibian network currently comprises two different types of Linux, a free OSS operating system, two versions of Microsoft Windows and two versions of Apple Operating System (OS) on a mixture of Intel, IBM and Apple computers. Despite the variety, all the machines within the organisation are networked through a 10/100Mbps switch and are in good working order.

The DTP unit uses Apple hardware and software and have recently switched from Aldus Page-Maker to Adobe InDesign as their primary layout system and use Adobe PDF to send pages to the printers. The writing and editing team uses OpenOffice, an open source word processor, and the news editor uses Claris 96 to sub-edit copy before it is sent to the designers. It was suggested, during interviews with both the IT Manager and the lead designer, that Adobe InCopy was being

considered as a possible solution for the workflow of news copy from the writing stations to the DTP stations but that neither section had seen the full scope of the product's features and been able to determine whether the product would, in fact, suit their needs. Both stated that the movement of copy from the writing stations, through the news editor to the DTP stations, was problematic in terms of tracking changes and keeping a final copy identical to what was finally printed. The reason for this is that sub-editing changes are made by the news editor and then again once the copy is inserted into the final page layouts. There is currently no automated way for them to update the source files with changes made within InDesign, and it was their hope that InCopy would solve this problem. The problem of maintaining accurate version control is dealt with differently in different organisations, and is generally closely related to the physical mechanism controlling newsroom copy flow. The current workflow management system at The Namibian will be discussed in greater detail below.

Despite the apparent success of the Linux operating system in the newsroom, there was a degree of criticism that emerged during interviews regarding the capabilities of the application to meet basic tasks like counting of the number of column lines taken up by a story. This, apparently, was the primary justification on the part of the news editor to continue using Claris 96 despite the fact that the company that produced the software no longer existed and so has not released a version compatible with the new Apple OS that the organisation uses. This criticism, it can be argued, is one that is symptomatic of OSS applications in general. While OSS has the benefits of being cheaper, the software is frequently a work-in-progress and does not effectively compete with proprietary software that has followed a more focused series of goals and objectives.



## 4.2 Data, information, content and knowledge management

This section analyses the processes in place within the organisation to manage news stories, photographs, contact lists, interview transcripts and other information necessary for the production of content for both the newspaper and the website. It also analyses the extent to which management systems within the organisation incorporate the creation and storage of knowledge.

For the purposes of this chapter, 'data' will be understood to mean individual bits that, when put together in a configuration that suggests their possible utility, become 'information'. 'Knowledge' comprises the further combination of information and experience in such a way as to suggest more complex paths of action and 'content' is information or knowledge organised in a publishable form. Content, in this context, is considered to be an asset imbued with an innate value as a result of the expertise required to fashion it from raw data and information.

### 4.2.1 Sources

Upon investigation, it was discovered that data and information management procedures at The Namibian are decentralised and are largely the responsibility of individual journalists and managers, who keep contact lists and other 'raw materials' in their workstations or in their notebooks. In addition, very little explicit or tacit knowledge has been transcribed and stored. Much of the procedural knowledge about how the organisation works is undocumented or displayed in a fragmented manner in the form of instruction manuals created by managers seeking to instruct new members of staff. It emerged as a theme during the interviews that tacit knowledge within the organisation is guarded by individuals as a personal asset and that there is a resistance towards sharing it. The

reasons for this are two-fold. Firstly, staff who have worked for the newspaper for a long time consider their contact lists, relationships with sources and experiences of the political process to be their primary source of value to the organisation. Secondly, there is a strong culture of source protection that, combined with a general distrust of technology security, creates a tendency among staff to internalise what they know even further rather than risk allowing the information to escape. As an example, the reason stated for not implementing a wireless network within the newsroom was the fear of corporate espionage, either by the government or by the newspaper's competitors. The troubled history of the newspaper and its exposure to violence and reprisals, including a grenade attack in 1991 that caused a massive fire in the editorial offices, have left an indelible mark on those who work there and this is passed down culturally to new members of staff.

### 4.2.2 Description of stages of copy flow

Content management, a necessarily explicit form of procedural knowledge vital for the day-to-day operations of the newspaper, takes on a variety of different and equally problematic forms. News workflow has become necessarily simplistic in order to minimise opportunities for error. News stories are sent from the writers to the news editor (who also fulfils a sub-editing role), via email or a network file copy process onto a central server. The news editor saves the stories onto a shared directory on the network, organised by date and page number where they are collected by the DTP unit and inserted into the page layout software. Once pages are laid out, the news editor does a final review, which frequently involves making small changes. The shared directory system is relatively new and seems to have been the subject of much contention in the past. The effective working of this system relies on strict management of staff, occasional detective work to discover where, in the

already simplified process, problems originated and self-discipline that is often difficult to maintain under strenuous conditions. The workflow system has no internal checks and balances, so when a writer goes home without saving a story on the network, there is little indication of where the file is physically located. Once pages have been sent to the printers, CD backups are created and are stored on site. There is no automated offsite backup system but CD backups are kept offsite in case of fire or theft.

### 4.2.3 Photographs

The management of photographs seemed to be in a greater state of flux and confusion during the time of my visit. There is a physical archive of photographic prints organised into folders and indexed in a room in the building, but since the photographers began using digital cameras, this archive has remained untouched. Furthermore, the cataloguing system is based loosely on categories and names of people and captions are seldom supplied for photographs. When I asked the photographer whether he frequently checked the archives for photographic materials that he might re-use, he said it was easier to take a new photograph.

The management of digital photographs is, however, in an even greater state of disrepair. Both the design team and the IT manager identified this as a problem that required an urgent solution. The problem stems from the innocuous names given to images by digital cameras and the unstructured manner in which the photographs are stored on the network. The IT Manager has, with a limited degree of success, implemented an open-source image cataloguing system called Gallery, but upon investigation, it became clear that the same problems inherent in the old way of cataloguing analogue photographs persisted with the digital collection. Photographs are seldom named

in a descriptive manner and the attachment of captions to images is limited, making searching and retrieval particularly difficult and reliant on the tacit knowledge of the photographer and editorial staff. The image library was, ironically, identified by the management staff as a vital asset with potential commercial value. On numerous occasions, the possibility of an online sales system was suggested as a way of generating additional revenue due to the value inherent in the historical nature of many of the photographs within the organisation's analogue and digital archives.

### 4.3 Advertising

The advertising unit is currently in the final testing processes of a new software package that performs Customer Relationship Management (CRM) functions alongside basic accounting and file management functions. The IT manager reported that The Namibian had purchased a proprietary system for advertising management and had requested a substantial number of changes from the software developers. This process had been ongoing for a period of over six months and frustration was growing as a result of a slow response from the programmers, incorrect versions being sent for testing, the reticence on the part of the programmers to significantly modify the underlying architecture of the software and other project management related issues. The software, as I came to understand, was close to completion and, having reviewed the latest version of the system specification and the requested changes, it seemed that its deployment was immanent.

The software, called HANSA, was locally developed and based on a client-server architecture that relies on the use of Microsoft Windows as the operating environment. It connects to a relational database and claims to be interoperable with the existing accounting package via a structured file export process that allows for import into Pastel.

Despite the development problems, the view is widely shared that HANSA will substantially improve and automate the current advertising sales and management processes.

#### 4.4 Web publishing

Despite the problems in other areas of technology implementation, there are systems in place to ensure the smooth running of the organisation. The biggest IT crisis, in the words of the IT manager, is related to the web and online community site and their associated management systems. The current web architecture is hosted off-site at a local ISP and comprises two servers. The website is hosted on an Apple OS9 server and the community site is hosted on a Linux server. Both of these systems are in need of substantial reworking as the website has not significantly changed since 2000 and the CMS is increasingly becoming a hindrance to the introduction of new features and the implementation of a new user interface.

The news website is based on a fast-CGI (Common Gateway Interface) plug-in for the Macintosh Webstar server called Netcloak, which allows for the daily upload of the newspaper content and some photographs. The CMS is relatively simplistic but now only runs on the deprecated Apple OS9 platform. In order to continue using the newer version of the CMS, an upgrade to Apple OSX Server is required and the use of a deployment tool called lassist. The IT Manager refers to this situation as “vendor-lock in”, as any move to another platform is very difficult. The difficulty stems partly from the manner in which Netcloak stores content and partly from the architecture of Apple OS9 and its file-naming mechanism. The Netcloak system uses CGI to render content supplied via input forms into static HTML. This aspect of the system is problematic because, despite its systematic separation of the web page templates from content at run-time, the Netcloak application merges the content and

layout template during the content upload process and not at the time a user requests a page from the web server. This means that once content has been uploaded it is embedded into a new HTML file and wrapped with the layout template, making the content useless in any other format. Another problem with this method of web publishing in general is that the website content structure is closely bound to the specific navigational structure of the site menus. By contrast, most CMSes on the market today utilise a CGI type interface to merge the content and formatting at run-time, enabling the reuse of content in different output formats, for instance WML for mobile telephones or XML for interoperability. Further, moving the content of the website to another production environment, for instance a relational database and web application server like PHP, would require the creation of software specifically to separate the original content from the HTML templates into which it has been embedded. Clearly this is not a desirable scenario but one that continues to get worse as more content is added to the website. As things stand at present, more than 200 000 individual static HTML pages would have to be converted into a new format and re-categorised and organised.

The online community website is less problematic as the ongoing archiving of community content is seen as less vital. The system currently in use is called Webcrossing and is based on OSS technology. It is used primarily for web forum management and the community site generates a significant portion of the overall monthly traffic to The Namibian online. It is important to note, however, that moderation of the community forum is done by the IT Manager on an ad hoc basis and the type of moderation normally involves the deletion of expletives.

The IT Manager conveyed to me a desire to see a closer integration of the workflow systems and

the CMS, and the implementation of a mirroring system between a data store inside the local area network (LAN) and a data store on the web server that updates on a fixed schedule during periods of low network traffic. In addition, it is a widespread concern amongst management staff that the website looks 'old' and needs a new user interface that makes it look more 'modern' and more user-friendly. These requests are taken into consideration in the following section where I suggest possible solutions to the current IT and KM problems within the organisation.

## 5. Recommendations

### 5.1 Proposed approaches to new technology

This section outlines an adapted version of Bill Rosenblatt's (see the Seybold Report, 2003) Enterprise Content Integration (ECI) model for practical implementation as a recommendation to ease The Namibian's CMS and KM systems. However, I am not going to recommend, in specific terms, the technology or features that need to be adopted, but rather an overarching framework for the selection of hardware, software and services for public and private use by the newspaper. It is intended as a guideline for IT policy decision-making and planning.

#### 5.1.1 Theory and practice

The Namibian currently faces three major challenges in relation to its ICT strategy. Firstly, the entire online strategy needs immediate revision; secondly, internal CMSes perpetually run the risk of becoming overburdened by weak procedural controls, a lack of content classification and the underutilisation of valuable resources; and thirdly, there is no clearly defined strategy for the future despite the clear need for one. This moment represents an opportunity for the organisation to

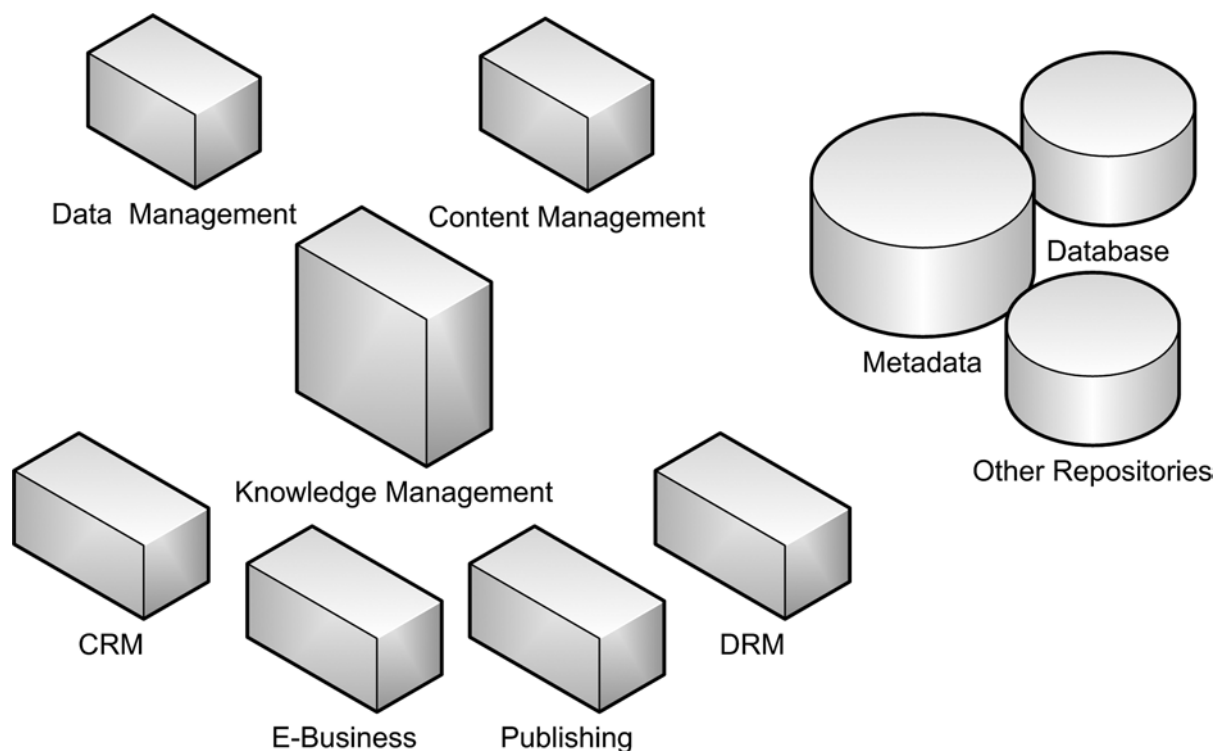
rethink its position in relation to The Namibian's economic imperatives and to identify ways in which these imperatives can be reconciled with the organisation's role as an information disseminator.

#### 5.1.2 The Enterprise Content Integration model

In order to better achieve the goals of, on the one hand, informing and educating the public on the other hand, simultaneously resolving the ICT challenges at The Namibian, a practical model for systems implementation is required. *Figure 2* illustrates a modified version of the ECI model adapted for The Namibian.

The ECI model, in simple terms, posits the centralisation of an explicit KM system around which a variety of services can be attached. These services, as demonstrated in the diagram above, are data and content management, CRM, electronic business, publishing and digital rights management [DRM]. Explicit knowledge can be separated into editorial and business functions so as to preserve editorial independence. The model can be visualised as a series of concentric circles revolving around a core of KM services and logics.

My adaptation of the ECI model is based on a series of general assumptions: 1) There are aspects of knowledge related to the different services that, when combined and used together, will form something greater than the sum of its component parts; 2) knowledge about specific tasks and objectives must take precedence over the internal systematic and technical definitions of how objectives can be achieved; 3) the centralisation of a knowledge interface is a more efficient way of discovering systematic potential as a whole, and, 4) the collation and conflation of different types of knowledge can lead to the creation of new forms of knowledge that are useful to the organisation.



*Fig. 2 [Enterprise Content Integration (ECI) model adapted for The Namibian]*

The establishment of a centralised KM system is, however, a complex and potentially expensive task which is perhaps more viably considered in abstract terms as an ideal that informs the configuration of the other business and editorial services. What I mean here is simply that the logic of the KM system may be derived from a series of initially simple semantic relations between data and information that, at some point in the future, reach critical mass or can be converted into knowledge through the application of tacit knowledge by users of the system into new instances of knowledge. As a practical example, digital photographs, new stories and address books can be digitally tagged with metadata categories that later form the basis of the creation of complex relations

between identity profiles. Real world examples such as semantic applications like Flickr, the online photography hosting service and 43Things.com, a service that allows users to categorise their life goals, and Google Maps, can be conflated into new forms of knowledge that combine the individually and independently-created semantic links between events, places and people. The pressing requirement, therefore, is that service layers within the organisation enable a level of interoperability between each other and a centralised metadata system for information categorisation and the construction of semantic relations. This can be achieved by selecting service architectures that support XML-RPC or Web Services, two communication frameworks that allow for platform-agnostic

remote procedure calls.

The application of this simple rule would immediately demonstrate that the current business accounting package, the web server architecture, the photography management system, and the editorial workflow system at The Namibian do not meet this criteria and should be replaced, whereas the client-server model of the advertising management system meets these criteria and is a good investment in the future. By the enforcement of this rule, the path is left open for the future integration of a KM centre that can be developed organically based on budget constraints, resource availability and genuine need. Another possible benefit of the integration between different service layers is the potential to explore connections between the editorial process and the community forums. A writer could, for instance, see what the public thinks about a particular topic during the research or writing phase, or get feedback about a story he/she wrote and use this as a basis for formulating a follow-up story, or to simply improve on the way the content is produced. The possibilities become limitless when data and information are separated from their technical form and particular application.

## 6. Conclusion

It is my hope that the findings of this study will act as a guideline for the development of a coherent ICT policy that can be used to improve the way the organisation manages its knowledge and other informational assets. During my interaction with staff at The Namibian, and my further analysis, it was clear that several of the current ICT systems are due for complete and total revision. For this reason, I have suggested the parallel use of a modified version of the Enterprise Content Integration model that centralises knowledge management services within the technology architecture. It is my view that the successful implementation

of such a system will lead to the development of new types of knowledge that can be better used to further the aims of both the business as a commercial enterprise and the organisation as an information disseminator.

# Chapter 4:

## The Nation, Kenya

by Aamera Jiwaji

### 1. Introduction

The study evaluates the Daily Nation newspaper in terms of its knowledge management (KM) newsroom practices and policy implementation, within an organisational, technological and regional context. This involves analysing the organisation's workflow systems, its current content and knowledge management systems (KMS), and its levels of technological adaptation. The aim is to come up with informed recommendations on how the organisation can improve on its newsroom operations, especially with regards to the management of its knowledge assets.

### 2. Background to the study

The Nation Media Group (NMG) is a Kenyan-based media giant that publishes more than 15 print media titles and spans three countries in the East African region. The NMG also has ties with another South African media conglomerate, Media24, which publishes popular South African magazines, Drum and True Love.

Established in 1960, NMG has added to its flagship newspaper the Daily Nation, a host of other media operations, covering a range of television, radio, print and internet outlets in the East African region. In Kenya, NMG's headquarters are at the Nation Centre in the capital, Nairobi, where the entire group's other titles and broadcast stations are also housed. Further, the Daily Nation shares a common newsroom with three other

newspapers in the stable, Taifa, the East African, and the Sunday Nation. This set-up afforded me an opportunity to explore the cross-floor symbiotic relationship between the publications, especially as it related to technology, policy and KM, while also at the same time focusing on the individual identity of the Daily Nation within the NMG. It will be shown later how the structural organisation of the NMG is central to our understanding of the operations of the Daily Nation.

While most African newsrooms are characterised by a low level of infrastructure and technological development, the Daily Nation clearly does not fit this bill as its newsroom is fully computerised and technologically advanced, and its workflow system is characterised by a content management system (CMS) that enables advanced (electronic) content sharing and management. It demonstrates a "pervasiveness of new technology, creation of a networking system, flexibility of processes and organisation, and convergence of technologies into an integrated system" (Castells, 2000:70-1). In addition, it has a network of bureaux across Kenya, and in Uganda (The Monitor), and Tanzania (Mwanainchi Communications Ltd & Radio Uhuru). As a member of NMG, the Daily Nation also shares content, organisational structures, policies, and at times journalists, with NTV and Nation FM, the broadcast arms of the group.

### 3. Methodology

The study relied on a combination of semi-structured interviews and observations. My interviews crossed into the different media outlets and were not limited to the staff at the Daily Nation newsroom alone. This was done in order to get a more comprehensive picture of the practical operations of the Daily Nation, and the relationship it shares

with other NMG publications and broadcast outlets in the group. My proposed interviewee base planned to include female representation but I lost their input due to interview scheduling issues. The table below outlines the number of people who were interviewed for the study and their positions within the NMG.

Interview	Name of Interviewee	Position in the NMG
1	William Karanja	Chief Librarian, NMG
2	Frank Ojiambo	Editorial Manager, Daily Nation
3	Robert Toroitich	Agency Manager, IT & Advertising, NMG
4	Emmanuel Juma	News Manager, NTV
5	Charles Njenga	News Editor, Nation FM
6	Catherine Gicheru	Senior News Editor, Daily Nation

Fig. 3 (Table representing employees and their positions at NMG)

All of the interviews were conducted over three days, which fell within one week. This was necessary as the NMG was undergoing editorial and administrative changes on a day-to-day basis, with the purchase of new papers such as the Weekly Review and the commencement of new projects. The interviews were followed up with two full days of newsroom observation, a week of research of secondary documents, both online and offline, another week of follow-up phone calls and emails. I spent three hours researching in the NMG library, and more time was actually invested in online searches of the NMG's archives.

#### 3.1 Problems encountered

Two main issues forced me to deviate from my plans: access and time. Despite many attempts, I was unable to speak to Catherine Gicheru, the Senior News Editor for the Daily Nation. To improvise, I had to interview Frank Ojiambo, the Editorial Manager, who also served as a News Editor at one time. I also discussed the role of the News Editor with other interviewees to evaluate the level of interaction between the different sections, in order to compensated for the actual interviews with Gicheru.



Secondly, due to newsroom schedules, I faced difficulties in speaking to any reporters, photographers or designers despite spending a Saturday at the newsroom. Again, I tried to compensate for this by tying them and their roles into my discussions with other interviewees. Time was also a major drawback. My interviewees' days would start around 9:30/10am at break-neck speed until 3pm, after which they would disappear for the day unless they were covering the late shift. Thus, I spent a lot of time waiting for interviewees to free some time to speak to me, in some cases failing completely to secure an interview.

Security issues at the NMG further constrained me in that I was not allowed to enter the newsroom without authorisation or supervision. While being an acceptable security measure for a newsroom operating in a city centre, this affected me seriously as a researcher and it thus affected the quality of my observations. For the same reasons, I was forced to downscale my ambitious intentions of interviewing the editors of the NMG's weekend publications, the East African and the Sunday Nation. I had also planned to visit one of the regional bureaux (Mombasa) to observe their relations with the head bureau in Nairobi and their application of the organisation's KMS. This was also not possible due to time constraints.

However, despite the above-mentioned constraints, my fieldwork was successful due to the quality of interviews I conducted, and the amount of secondary information I collected. Upon completion of this report, I plan to re-visit the newsroom in order to discuss my recommendations to key newsroom actors. I believe that this will offer crucial feedback and closure to the research project.

### 3.2 Access and execution

My plan for the execution of the study was heavily reliant on what my concept of a newsroom was,

one overly determined by my past experiences – like the one-floor newsroom at the East African Standard, and the two-floor Pulse FM radio station, which I once worked for in Mombasa. Both these organisations had a maximum of 25 employees, with one boss who had the final word on editorial, financing and logistics issues. At NMG, however, I was faced with an organisation operating in a seven-storey building merging a radio station, a television station, four daily publications, four weekly publications and more than ten weekly and monthly magazines, with each newsroom containing more than 300 staff members. There was also a hierarchical structure of four editorial levels from the Senior News Editor down. I was unprepared for the level of interaction between the different media outlets, and was surprised by the integrated editorial approach that the NMG was operating under, with one editorial policy extending to all of its publications, be they print or broadcast-based. Thus, I was forced to factor this integrated approach into my study although the initial aim was to investigate only the Daily Nation newspaper. However, the result was to interrogate the extent to which NMG operated as a converged media group, and the level of content and equipment sharing that existed across the stable. Interestingly enough, it was both the IT and Advertising departments that seemed to have a better working knowledge of this integrated approach than most senior editorial staff in the news department.

My plan assumed that I would gain access to all the areas that were key to evaluating the Daily Nation's KM and workflow processes. I envisaged the luxury of having an in-depth tête-à-tête with key newsroom staff, but reality on the ground proved otherwise due to time and other constraints already mentioned above. At the same time, however, a significant amount of detailed information was gleaned from one individual in the organisation, details which spanned more than one depart-

ment and more than one production outlet.

## 4. Discussion of findings

Information management, the means by which “information storage and retrieval system where it [information] can be used and reused” (Wikipedia), is one of the sectors that the NMG considers integral to the well-functioning of a newsroom. However, KM, which can be defined as “the development of tools, processes, systems, and cultures to improve the creation, sharing and use of knowledge critical for decision making” (Welch, 2005), seems to be a new idea to the NMG information managers, despite the similarities KM shares with the NMG’s current information and CMS. This will be elaborated on in greater detail below.

### 4.1 Policy in relation to practice

The NMG’s organisational and ownership structure impacts on its policy creation and implementation strategies. The existence of one editorial policy for all NMG publications, which is overseen by the Group Editorial Director, ensures that a level of consistency is maintained across publications, media outlets and national borders. Immediately below the Group Editorial Director is the Group Managing Editor, who is also followed by the Managing Editor and the Senior News Editor. These hierarchical tiers allow different levels of accountability to be established which incorporate a high level of feedback from those that the policy influences on a day-to-day basis (the journalists in the newsroom), and to those that can implement change through the formal channels (the authorised policy makers) (Colebatch, 1998:16). According to the Group Editorial Director, Wangethi Mwangi, the Group Policy emphasises thorough research when covering a topic;

*Background information, names, ages, contrary points of view (if appropriate) will be thoroughly*

*ascertained before a story is submitted for publication. Where further depth is required – either explanation or history – this will always be provided so that news coverage is never untruthful, superficial, unbalanced or incomplete. In this regard, the library and the Internet will be used extensively and intelligently.*

Traditionally, it is knowledge which is regenerated through the addition of new information, but the NMG editorial policy incorporates an element of content regeneration through a policy guideline which directs that previous stories be followed up.

The advantage of a Group Editorial Policy is the creation of a group identity which incorporates the values and principles of an East African audience. However, failing to have a formal editorial policy that targets the quirks and individualities of each newsroom gives rise to the operation of an informal ad hoc policy, which fills in the gaps of the Group Policy. These ad hoc policies are developed at newsroom level, and are implemented by the Editorial Manager or the News Editor of each different publication/station. This allows the day-to-day operations in the newsroom to be shaped by the members of the production process. Each newsroom draws on the Group Editorial Policy for its identity and creates a complimentary informal newsroom policy for practical issues. It is this informal policy that undergoes evaluation and modification more frequently than the formal Group Editorial Policy, the conclusions of which are periodically incorporated into the group policy, hence allowing a bottom-up policy review procedure which operates uniquely within both a power and participatory policy paradigm.

The key player that has a large amount of influence on NMG policy dynamics is the founder, the Aga Khan. His residency in Canada allows the NMG to bridge the informational and economic divide and operate as an international media house

which is neither financially nor culturally constrained. This has allowed an interesting situation to form, that of a media house shaped by foreign technology processes which, rather than disadvantaging the NMG from serving the Kenyan public, further strengthens it (Hosein, 2004:196). These influences are formalised into policy initiatives that support technological innovations such as digitisation and networking.

## 4.2 The diary meetings

Mwangi revealed that the morning diary meetings are both a “post-mortem” session concerning the previous day’s newspaper (as part of efforts to monitor and improve on quality), as well as a comprehensive review of the pending edition. Through a discussion of stories which were published in the

previous day’s paper, the diary meeting facilitates the conversion of information into knowledge through the “lessons learnt” or “best practice approaches” (Robertson, 2003), a knowledge capture method which allows a newsroom-based discussion of successful reporting methods. This morning meeting is followed up by another one in the afternoon. Particularly, the afternoon conference, which focuses more strongly on the next day’s paper, identifies content for syndication and for common usage across all the publications under the NMG stable. However, I observed that these meetings are not recorded, meaning that whatever knowledge is created and transferred in these daily meetings remains tacit knowledge which is kept by individuals. The table below illustrates the meetings the Daily Nation newsroom holds on a daily basis:

Time	Event	Issues Discussed	Attendees
9.00 am	Planning	- Discussion of stories to be covered, - Story assignments.	Daily Nation staff
11.30 am	Post mortem of paper	- Past day’s paper discussed. - Comparison with other papers and stories covered. - Way forward.	Daily Nation staff
3.00 pm	Story-gathering review	- Coverage at hand, selection of lead stories, content for syndication and for common usage across plat forms.	Managerial level staff of Daily Nation, Nation FM and NTV

*Fig. 4 (Table representing meeting schedule and issues discussed at the Daily Nation)*

## 4.3 Description of stages of copy flow

### 4.3.1 Head office

The first step in collection of news at the Daily Nation is kick-started by the editor, who uses his discretion in determining which story ideas are newsworthy. After all the ideas have been brought together, he allocates the newsworthy ones to journalists in the newsroom. Afterwards, the reporters go out into the field. In the field, the reporters are armed with various tools for capturing their data, and these include notebooks, personal source contact book, or tape recorders. Upon returning to the newsroom, the policy in the Daily Nation is that the reporter must discuss the events that he/she went to cover with the news editor. This is done so that the news editor can guide the reporter in terms of the angling of the story and other ethical and professional considerations. In addition, this discussion allows the reporter to order his/her thoughts, glean the points that are important, discard the rest, and structure the information into a story. The reporter also applies a second level of knowledge at this stage, the institutional knowledge on matters of style and format, which are contained in the organisation's style guide.

The completed story is placed in a "News" folder, which is accessible to the deputy news editor. The deputy news editor picks the story from the folder, clarifies a few points raised in the story, and then pushes it into the sub-editing queue. The chief sub-editor picks stories from here and assigns them to a team of sub-editors, who verify the grammar, punctuation, structure and style of the story. They constantly refer to the organisation's in-house style guide, electronic dictionaries and spell checkers. Based on their experience, they may also improve the quality of the story in its totality, or re-work some paragraphs, and depending on required length, either expand it or cut it down. The

chief-sub-editor then fashions headlines for all stories, then copies them into the next folder in the workflow, which is named according to the pages on which the particular stories are supposed to go. From here, stories are picked up by the lay out team, who place them on their assigned pages, and attach photographs where necessary. During these stages, the Senior News Editor has access to each edited version of all the stories, including the laid-out pages. After final quality checks have been made, the laid-out pages are sent to the printers. This stage is both automatic (the DTI checks image resolution) and manual (the agency manager and the editor check the headlines, pictures and their relation to the story).

The lay out staff used to use Quark Xpress for the design process, but now they have since changed to a content management system called Digital Technologies International (DTI). According to the chief sub-editor, DTI integrates all the departments and functionalities within the news organisation, through the production stage into the final newspaper product in a fast and efficient manner, a process which bridges the divide between advertising and editorial. Hence adverts can be booked, inputted into the system, up to 90 days in advance. Quark Xpress continues to be used in the preparation of magazines and supplements for the newspaper.

I observed that on each level of production, the story passes through a gatekeeper, such as the chief sub-editor, the news editor and the design staff. Owing to the number of stages that are involved between the collection of data and its conversion into a story which is published in the newspaper, there are a number of people who digitally "touch" the news product and change it in various ways. As a result, the final product is quite different from the initial raw materials collected by the journalist. This is to imply that each stage in the production process either adds to, or

subtracts information from the original piece, with the aim of making it a commodity that can be sold to readers. However, this also implies that at each stage of production, information is also lost.

### 4.3.2 The regional bureaux

The Daily Nation's regional bureaux in Mombasa, Nyeri, Kisumu, Nakuru, and Eldoret are exact replicas of the Nairobi office. Headed by a bureau chief, each is responsible for its town and outlying areas. Each bureau has a reporter, a correspondent and a photographer who is based in the outlying areas of the particular region. The bureaux stay in touch with the Nairobi newsroom mainly via email (dial-up connection) and telephone. Once a reporter has compiled a story, he/she forwards it to the bureau chief, who may re-work it first and then in turn forward it to Nairobi by email. VSAT (very small aperture terminal) technology is being looked into with the aim of further integrating the regional bureaux into the Nairobi newsroom set-up.

Due to the established bureau structure of the Daily Nation, these regional bureaux are often the first to cover stories from outlying provincial areas, and hence NTV and Nation FM often pick breaking news from the Daily Nation news queue. However, the Editorial Manager, Frank Ojiambo, was quick to add that a competitive edge is central for any news organisation, and thus, while allowing a sharing of content across the stable, it was important for the Daily Nation to retain its reputation of being the leader in breaking news in East Africa. Thus, at times the newspaper does not allow National FM and NTV to get some of their leading exposes before they have appeared in print. I discovered that the sharing of content across language barriers was also possible, such as situations where stories covered in the KiSwahili Taifa were translated for publication in English in the Daily Nation. Content is not the only thing shared

across the stable, however. At times members of staff from one outlet can be asked to cover a story that is needed by a sister publication. Ojiambo, however, pointed out that this happens only when both parties are agreeable, not as a rule: "We do it [share resources across the board] as and when it suits us". In addition, a cross-outlet editorial meeting is held every afternoon to discuss story ideas and headlines on each publication to ensure consistency in coverage.

### 4.4 Intranet

Robert Toroitch, the Agency Manager for the IT and Advertising department, was supportive of the integration of all the NMG outlets into one building, arguing that this could lead to increased productivity within the stable. The current DTI system restricts access to stories in the production process, but allows more than one person to work on a publication stage at the same time. The system also integrates the operations of the regional bureaux, by allowing them to load stories onto the DTI system from off-site. The Mombasa, Kisumu and Eldoret bureaux have already started operating on the system, and the Nakuru and Nyeri bureaux will be added later this year. The wire feed is also incorporated into the DTI allowing stories from external agencies, such as the Kenya News Agency, Reuters, AFP and other syndications to be fed directly into the "News" queue. The DTI system also facilitates storage of copies of the publications as far back as three days. Toroitch added that since digital versions of the paper were available online in PDF format on Nation Media Online, there was no need to save the pages for longer than three days, arguing that "a story is more perishable than vegetables in the street".

The important security feature that the DTI system incorporates is that it maintains an audit trail which allows the network administrator to monitor access and alteration of each document and

folder. Toroitich said that the greatest advantage of the DTI system, apart from enabling an efficient workflow system and allowing security controls to be monitored, is that in synchronising advertising and editorial, it enhances the speed at which the newsroom operates. This is because once a page has been completed, the computer automatically begins processing and ripping (colour separation) the page so that it can go straight for press once quality control has been granted. The DTI also fits in well with printing efficiency since it circumvents the preparation of negatives and their physical transfer by road to the industrial area printing press. Since 2002, the data is sent from the Nation Centre on a telephone cable, CTP (Computer to Printer), straight to the printing press computers, thus avoiding the unpleasant surprises that are associated with physically transporting the copy to the printers.

## 4.5 Technological adaptations

### 4.5.1 Photographs

A gradual move from manual to digital cameras has been made by all of the NMG outlets, spurred by unwritten policy directives which have affected purchasing and procurement methods in the interests of enhancing productivity and maintaining the NMG's competitive edge over its rivals. Currently, all of the NMG publications share an imaging centre which processes raw images and stores them on a central database. This allows for a greater level of content sharing between the print and the broadcast arms of the NMG. Toroitich said that although it is possible to extract pictures or images from video footage and use them for the newspaper, the quality is often poor and thus this rarely happens since the quality of a newspaper's photographs is very important in a competitive Kenyan market. However, he cited a case where a breaking news story was covered solely by a TV crew necessitating extraction of

images from video footage for the publication on front page of the Daily Nation. To get round the quality issue, the designers decided to show a sequence of small, sequential shots instead of one large image, whose poor quality would have been made obvious. Similarly, sound bytes have been extracted from NTV's video footage for use in Nation FM, a much easier process. With rapid quality improvements being made in digital equipment, however, Toroitich said he envisaged a higher degree of content sharing between the outlets.

### 4.5.2 Distribution

For Ojiambo, the move towards a digital newsroom presented a promise for the easier distribution of the product, especially for a newspaper like the Daily Nation that covers the whole of Kenya. At present, newspapers are physically transported from Nairobi to Mombasa and other cities by van, owing largely to the costs of constructing a printing press in each city/town, and the Kenyan readers' inability to access electronic versions of the newspaper. He thus revealed that NMG has had to add to its growing number of companies, a logistics arm, Nation Carriers Ltd, which is responsible for transporting the stable's titles to outlying areas. The van leaves Nairobi at 10pm or 11pm (after printing) and arrives in Mombasa at around 6am the next morning. If there is an unforeseen delay, such as accidents, the organisation loses out on sales to its rivals. Ojiambo noted,

*Newspaper reading habits in Kenya are determined by early arrival. People buy what is available, they don't have the kind of loyalties that there are in the developed world... If the Daily Nation had a great story, but was beaten to the streets by The East African Standard, its greatest competitor, no-one will sacrifice another Kshs 35 for the Nation ... Hit the street before the opposition, and you carry the day.*

### 4.5.3 The website

The Nation Media Online team is also integrated into the organisation's DTI system. An office-based newsroom, without a team of reporters and photographers, it is fully reliant on the DTI, and in particular the Daily Nation "News" queue for stories which it selects and repurposes for instant uploading. In this sense, therefore, the Nation Media Online is a digital newsroom since its methods of story selection are completely reliant on the NMG network. The Nation Media Online advertising team, however, operates relatively autonomously and adverts in the print version of the paper are not necessarily carried over to the internet, unless specifically requested.

Nation Media Online distributes the Daily Nation stories in five ways. Firstly, it re-purposes selected stories from the print issue of the Daily Nation (and other publications) into Nation Media Online. Secondly, it syndicates select articles and publishes them on other websites and portals such <http://allafrica.com>. Thirdly, it offers an electronic version of the entire print issue of the Daily Nation and the East African to subscribers outside Kenya. The digital version of the paper, which is in PDF format, replicates the exact layout, advertisements and page numbering of the print issue of the Daily Nation. This version is made available at <http://www.newsstand.com>, a website that offers a digital electronic version of a number of daily and weekly newspapers in Africa, Europe and America.

Newsstand boasts six key features, and these, according to the website, are:

- Instant delivery ["Have your digital publications waiting for you, on time - every day"],
- Easy to read. ["Zoom in to text and pictures with a single click"],
- Searchable text. ["Research any topic instantly, in current and past issues"],

- Portable. ["No need to be on-line - read in the park, train or on the plane!"],
- Advanced navigation. ["Jump to sections and article continuations with a single click"], and
- Environmentally friendly. ["Save trees by reading electronic editions"] (NationMedia.com, 2005).

NationMOBILE is the fourth feature that is available via Nation Media Online. This feature allows subscribers to receive breaking news (only headlines) on their mobile phones. The service, which is also provided in association with Newsstand.com, offers six alerts a week and is integrated to the country's mobile service providers' network. The fifth way of distribution is an email newsletter which is prepared by the Nation Media Online team and contains weekly updates and links to the main story on the site. The newsletter is delivered gratis to readers via a listserv system.

## 4.6 Asset Management

### 4.6.1 Print assets

The NMG has two libraries within the Nation Centre which deal with all of the NMG productions in Kenya. One is for the print media and the other for the broadcast media. The main library (the print library) houses hard copies of all the articles printed by the NMG, and these are ordered according to subject matter. The library also has a selection of reference books such as encyclopaedias, dictionaries, and handbooks on particular subjects, to assist journalists in their day-to-day tasks. The library also collects and stores the Senior News Editor's diary for each year, which contains information regarding daily story allocations. The diary also includes all emails, faxes, press statements and contact numbers sent to the newsroom for the Senior News Editor's attention.

William Karanja, NMG's Chief Librarian, said that the library plays a major role in enabling the or-



ganisation to meet its objectives: "We are in the information world and for journalists to inform other people, they themselves need to be well informed". Due to space constraints, other publications within the NMG are housed in Cambrian House, a block away from Nation Centre, pending a move to a warehouse on Mombasa Road, in the outskirts of the city.

The electronic library houses all copies of digital and electronic tapes which have been broadcast on the radio and TV station. This library also houses the electronic images, but negatives and film copies are kept in the print library.

The present NMG archiving system for print issues is being evaluated and will soon undergo an updating process, to be in line with international trends in digitisation. This will involve moving from analogue to digital photography, and establishing a more efficient indexing and categorising system, which will include scanning old print issues and incorporating all the NMG publications from Tanzania and Uganda, which are currently running their own libraries.

Currently, print copies of the Daily Nation are bound in monthly bundles and stored in the library. Selected articles are photocopied and subject-indexed according to the content of the story, and are stored in folders to allow for faster retrieval. Other non-NMG publications such as the East African Standard, the Kenya Times and The People are also catalogued in the same manner. Members of the public are allowed to access the NMG library at a fee of KShs 200 for three hours, with a special fee for students. There is, however, a specific time in which the library opens for the general public, this is done in order to give preference to NMG journalists conducting research.

All photographs are collected and stored in the library, and are catalogued according to subject,

with an attached caption, indicating the details of the subject(s) of the photograph. These photographs are counted as part of the assets of the NMG and sold at KShs 5,000 each. With the move toward digital photography, an online archive for digital photographs is also being established. The digital photographs are systematically written on Compact Discs (CDs) and stored in boxes in the library.

Karanja revealed that the manual cataloguing of photographs is difficult in that each picture (or story) has multiple sub-categories under which it can be filed. A story on agriculture for example has a sub-section on crops, and sub-sections under that would include coffee, maize and cocoa. But a story/photograph discussing the effect of the budget on the agricultural sector would necessitate a cataloguing repetition under agriculture, horticulture and economy. Thus, the library currently resorts to photocopying the same story (or picture) and storing it in the relevant different folders.

A move is however being made to network the entire newsroom starting from each reporter's desk through to the Kampala and Dar-es-Salaam branches. Such a move would allow the NMG library to become a 'general store' for regional information and enable the organisation to offer the public access to its database (which would include all print-based copies that would have been converted to digital format) at a fee, thus establishing an information/content flow of over a network that becomes the newspaper's lifeblood (Northrup in Quinn, 2002:26). The move towards greater digitisation of the library will also allow for the management of every reporter's desk, by introducing a storage facility of all unpublished and the published materials. The proposed digitisation will also create an online searchable database of all information and knowledge generated by the organisation. It, however, is a purely technology-



based initiative, which ignores the vast amounts of information stored within the individual members of staff [Schlogl, 2005]. Thus, upgrading to an online database would exclude the information and experience stored within Karanja, as an individual, for example - information that will not be catalogued and would only be accessible for as long as Karanja remains in the organisation.

#### 4.6.2 Digital assets

Currently, the Nation Media Online does not charge a subscription fee for access to its stories, although users are required to register to be able to use the site. A subscription cost is however attached to the digital version of the Daily Nation (although provided at the cost of an affiliation with Newsstand), with an additional charge if one wants to conduct full text searches in the online archives. I observed a disparity in that while the print version of the Daily Nation is sold for KShs 35 within Kenya, the digital version of the paper is available at \$0.75 (an equivalent of KShs 60). Payments are to be made directly to Newsstand and can only be made by credit card. NationMOBILE offers six headline alerts a week to subscribers, at a cost of KShs 10 per local SMS (short message service) and £1.50 for an SMS to the United Kingdom, excluding operator costs.

#### 4.7 Training

According to the Group Editorial Director, the Daily Nation's Editorial Policy highlights the importance of regular staff development through in-house training that is provided by consultants and training editors. The policy also explicitly encourages the establishment of reciprocal arrangements with other media houses to facilitate limited exchange visits between the journalists from different media houses for the purposes of improving professional skills and standards. For information technology related issues, the IT department holds

regular training workshops for editorial staff on the DTI system, network and intranet usage every two weeks. The IT department is trained abroad to keep up with product developments that may enhance productivity and efficiency within the newsroom.

### 5. Recommendations

#### 5.1 Knowledge Management System (KMS)

##### 5.1.1 Technology

There are two main requirements in order for an organisation to adopt a KMS: technology and human resources. Around a year ago, the NMG consolidated its print and media outlets into one building, the Nation Centre. This move was paralleled by an increased level of networking for its regional bureaux and across media outlets based in Nairobi, and a move towards greater digitisation for the stable's broadcast and print outlets through the purchase of the latest newsroom equipment and software.

Nevertheless, one technology-related area that could be improved upon is the establishment of an East African network that would allow connectivity between the Dar-es-Salaam, Kampala and Nairobi newsrooms. Such a move only awaits investment in the infrastructure needed to integrate the Tanzanian and Ugandan bureaux into the Nairobi CMS, enabling a greater sharing of content and knowledge across outlets and across geographical boundaries. The regional bureaux, although connected to the Nairobi head bureau through mobile phones, faxes and the internet, would operate more efficiently if VSAT technology were to be set up since currently these are largely dependent on government infrastructure. Such technology would also allow the regional bureaux a degree of autonomy to prepare their stories, seek editorial

approval at regional level and send them directly to Nation Media Online, thus bypassing the time-consuming process of forwarding stories to the Nairobi bureau for uploading.

The current CMS also requires re-structuring to cater for more departments within the NMG than just the newsroom. While the security of information would be an uppermost concern in such a move, it would allow different departments to access organisational information and knowledge which may improve productivity and efficiency. It is, however, important to note that technological provisions alone will not enable knowledge capture. An institutional knowledge culture would need to be created.

### 5.1.2 Human resources

While the Daily Nation newsroom seems to be quite advanced in its KM strategies technology-wise, this is not the case with regards to its strategies for managing the expert knowledge that resides within its staff. For example, the only knowledge retention method currently used by the Daily Nation newsroom is the discussion that occurs between the editor and the reporter upon returning from a story. This attempts a level of knowledge exchange by verbalizing the process of knowledge formation, but this knowledge does not enter a central repository. Instead it is stored in the individual editor and journalist, making it inaccessible to the organisation unless they share it with others during diary meetings. Thus, the knowledge generated from experience and skills remains transient as it travels with individual employees (Brooking, 1999:39).

The Daily Nation newsroom needs to look into how a greater amount of knowledge can be collected from its newsroom staff, compiled into an organisational hub and shared within the institution, something which is being attempted in the

Western media and which the NMG could pioneer here in the Africa. There are various ways in which this can be done, beginning by drawing a 'map' of knowledge within the newsroom. This could involve the creation of 'yellow pages' that show who knows what, about what, within the newsroom; a 'lessons-learnt' database that allows knowledge to be captured and applied within the institutional framework, and a news and gossip database about competitors or clients (especially useful for the sales and advertising departments) (Boulet and Hamilton, 1997). The methods of knowledge capture and retention within the organisation could involve, among other things, 'exit interviews' to ensure that the knowledge an individual gained during the course of their employment in the organisation is not lost when they leave the organisation. Secondly, the 'best practice' approaches which captures the expert knowledge within individuals for application to other departments; and, thirdly, receiving feedback on the CMS from end users (the journalists) in a bottom-up approach (Robertson, 2003b).

Finally, the implementation of a KMS into the Daily Nation newsroom would have training implications since the entire workflow would have to be restructured to incorporate both information collection and knowledge capture, transfer, retention and management (Crown, 2005). Such training would have to be targeted at all the users of the KMS and not just members of the newsroom.

### 5.1.3 Archives

Clearly, the NMG's archiving system needs an urgent overhaul. The current plans to computerise and centralise the archives regionally and across media outlets would only fulfil the first stage of enabling a user-friendly searchable multi-platform database. A researcher should be able to find a document on rape statistics that was published in the Daily Nation and simultaneously view links

to television and radio coverage of the issue, and possibly comparing with regional statistics. In order to achieve this, this would entail the creation of an efficient categorisation system which makes it easy for users to find the information that they are looking for amidst the hundreds of information nuggets available. These modified methods of knowledge capture would have to work hand in hand within NMG policy, workflow system, human resource management and the KMS's technological elements since restriction levels would have to be placed on who can access, amend, and delete content in the system.

In conclusion, the Daily Nation newsroom, despite its technologically advanced state, must invest more in the creation of a KMS that merges the technology and the human elements. In short, a knowledge culture that is founded on a policy-driven decision, and one which builds on its current CMS, needs to be established in order for its newsroom operation, its productivity speed, its efficiency and the quality of its publications to improve. The establishment of a knowledge culture at an institutional level would also assist in the creation of a corporate identity for the NMG across its publications and outlets, and would allow it to compete more effectively in the African media industry.

## 6. Conclusion

The study sought to evaluate the Daily Nation newsroom in terms of its knowledge management practices and policy implementation, within an organisational, technological and regional context. This involved analysing the organisation's workflow systems; its current content and knowledge management systems (including the library, the website and archiving systems); and its levels of technological use and adaptation. It concluded by arguing that although the Daily Nation has a highly technologised newsroom, there is still an

urgent need to review its knowledge management practices. It was, therefore, recommended that in addition to investing in ICT infrastructural development, the organisation also has to focus on the human considerations (especially capacity building) if the introduction of an effective content and knowledge management is to take place.

# Chapter 5:

## The Guardian, Tanzania

by Denis Jjuuko



### 1. Introduction

The chapter discusses the general background to the study, including its initiation and execution, as well as providing a brief history of the organisation under study, Tanzania's The Guardian newspaper. It assesses the workflow processes that the editorial staff at the newspaper engage in order to produce news. The chapter also discusses The Guardian's website and library, and relates these to the organisation's policies on content, knowledge and informational asset management. Lastly, the chapter offers recommendations emanating from the study.

### 2. Brief history of The Guardian

The Guardian is an English daily broadsheet newspaper that is published in Tanzania. Launched in 1994, The Guardian is owned by The Guardian Newspapers Limited, a subsidiary of IPP Media of Tanzania. IPP Media, which is owned by IPP Holdings, is one of the biggest media conglomerates in East Africa, with interests in newspapers, online publishing, news agencies, and mobile telephony. IPP Holdings also owns several radio stations, including East African Radio, which broadcasts across all the East African countries. It also owns three TV stations, all of which are broadcasting in at least three East African countries, with the third (Pulse African Television) operating in several other sub-Saharan African countries as well. All the broadcasting stations are housed in one office and studio complex in Dar-es-Salaam, Tanzania.

In the newspaper industry, IPP Media owns nine newspapers namely; the flagship *The Guardian* (English daily), the *Sunday Observer* (English), the *Financial Times* (English weekly), *Nipashe* (Swahili daily), *Alasiri* (Swahili weekly), *Kasheshe* (Swahili weekly), *Lete Raha* (Swahili Weekly), *Komesha* (Swahili weekly), and *Nipashe Jumapili* (Nipashe on Sunday).

All these newspapers share the same facilities (including library) in one expansive newsroom which has up to 104 workstations on the ground floor of the IPP complex. The editors sit on the right hand side of the newsroom with vantage views to the rest of the newsroom. The managing editor, who manages The Guardian's editorial department, sits in an adjacent glass cubical office at the front of the newsroom. The IPP Media newsroom has one 14-inch colour television set, which is connected to Digital Satellite Television (DStv). The photographic and information technology (IT) departments are located at the foot of the newsroom, while the library is one floor up, next to the entrance. The newspaper is divided into four sections, namely, news, features, business, and sports. Each of these sections has its own editor and a pool of reporters. The other eight newspapers have their own editors and reporters as well, however, all these report directly to the managing editor of The Guardian.

### 3. Methodology

The study was conducted via a combination of observations and interviews with key newsroom staff. Getting access to The Guardian newsroom was made easy by the coordinator of this project who made the initial contacts with the managing editor of the newspaper group. After the initial contacts were established, I communicated with John Mireny, the editor of the Financial Times, via email to organise and confirm the dates of my intended visit. Mireny contacted all the interviewees and informed them of intended visit in advance. At one stage, however, the researcher had to fax a request for permission to carry out the study to the managing editor. Although the managing editor did not reply to the facsimile, I simply proceeded to Dar-es-Salaam, and he only acknowledged receiving the communication verbally after I had introduced myself to him. He introduced me to my potential respondents and the rest of the newsroom staff.

I spent four days at The Guardian newsroom with the first day initially planned for making observations only. However, one day seemed inadequate and observations were concurrently carried out with interviews later on. The observations also included spending two three-hour intervals [divided between mornings and afternoons]. The idea behind this was because I noticed that some journalists were freer in the mornings while others were freer in the afternoon. As a result, I wanted to see how they spent their 'free' time in the newsroom and also to find out if they used the library before or after they went to the field to collect data. There were also some general observations carried out in the newsroom, including attending what was called a 'post-mortem' session. This will be returned to later.

Selected interviews were carried out with the editor, the librarian, the IT manager, the chief pho-

tographer, and three reporters. One of the reporters was from one of the weeklies. The main idea behind this was to investigate whether journalists from the weeklies went the same newsroom routines as those from the flagship. However, after realising that the routines were more or less similar, a scheduled third interview was cancelled to avoid unnecessary repetitions. The interviews were carried out over a three-day period.

## 4. Discussion of findings

### 4.1 Workflow processes

#### 4.1.1 The "post-mortem" meeting

The process of gathering news at the organisation starts at 8.30am with the daily 'post-mortem' session, which is chaired by the news editor. This session, which takes place in the newsroom, lasts for a maximum of 45 minutes and it is only intended for The Guardian journalists, although reporters from sister publications are free to attend. It is attended by an average of 23 journalists. The 'post-mortem' is mainly for assessing the day's newspaper and also coming up with ways of improving its content. The idea here is to judge the way the paper covered issues as compared to other competing newspapers. It is also a time used for pointing out errors in the paper, including errors in lay out and picture captioning. This session is not intended for discussing story ideas, "because reporters never give them out during such meetings"<sup>1</sup>. If any story ideas are discussed during the meeting, they are most likely to have been brought up by the editor or are derived from press releases.

At 10am, after all reporters have left, the editor chairs another meeting to discuss the next day's paper. This meeting is attended by the news editor, features editor, sports editor, business editor, and the chief photographer. Each of the

line editors briefs the meeting of the main stories they expect from the reporters so that they “get a feel of how our paper will look like”<sup>2</sup>. Some story ideas are generated from this meeting and are allocated to reporters for follow-up.

### 4.1.2 Data gathering

After the “post-mortem”, reporters proceed to the field after pitching their story ideas individually with the news editor. There are many ways of sourcing for news, including getting ideas from the line editors, fellow reporters, or sources who initiate contact, or even other newspapers, and radio and television stations within the stable<sup>3</sup>. If there are any future calendar events that have come to a reporter’s attention, these are written down in their diaries that are checked every morning before leaving for the field. Follow-up phone calls are made, if necessary, to confirm the events or availability of particular potential interviewees before proceeding to the field.

Most of story ideas are communicated to the reporters through face-to-face discussions and/or interviews and mobile phones. Short Message Services (SMS) are also used by a few individual sources, although mainly for follow-up purposes. It is only the senior editorial staff that are provided with mobile phones and at times they use these to call sources on behalf of reporters. The line editors’ mobile phone numbers (and email addresses) are always published on the editorial page of The Guardian and the general public usually uses these to send SMSes to provide news tips, or even to complement or complain to the newspaper. Faxes are sometimes used by sources as either news alerts (press releases), or for supplementary data after an interview has been conducted with them. However, it is not a very common tool of communication between reporters and their sources. Press releases are only commonly used as invitations to conferences<sup>4</sup>.

Email and the internet are inaccessible to everyone, unless, “you are a senior reporter or somebody who occupies the swivel leather seats”<sup>5</sup>. The swivel leather seats are apparently a status symbol in the newsroom, being supplied only to the senior editorial staff. As for the internet, it is only connected to the line editors’ and senior editor’s office. Apparently, this was necessary to “avoid wastage of valuable resources... as most journalists do not even know how to use the internet”<sup>6</sup>. There is “even a general lack of knowledge among the editors, which may explain why most of them are not pro-internet”<sup>7</sup>. Secondly, it was said that those few journalists who knew how to use the internet spent a lot of time searching for irrelevant issues on the web, than conducting useful research. In addition, the newsroom does not have an intranet facility and most interviewees I talked to never seemed to care if it was there or not.

### 4.1.3 Description of stages of copy flow

After gathering all the necessary information, reporters return to the newsroom and each one individually briefs the news editor of his/her experiences in the field before typing the story on the newsroom PCs using the Microsoft word-processing packages. After all the relevant information has been captured, the story is filed on the Local Area Network (LAN) on the “Cue Drive” which is found on the Microsoft 2000 Server (this type is a UTP Cable Category 5, with four de-link switches and 96 ports)<sup>8</sup>. Each of the nine newspapers in the stable has a folder on this server. For example, a Guardian reporter saves the story on the LAN as follows; Cue/Guardian/features/<file name>. The server has storage capabilities of up to 60 Gigabytes, with an external 200 Gigabytes drive for back-up purposes. After the end of each day, the IT department backs up all the files on this external drive.

When a reporter has completed a story that has

been assigned to them, he/she registers it using a combination of his/her name and a particular phrase that is connected to story concerned. The stories are recorded in the news editor's book simply called "The Register". Reporters are not allowed to print any materials, mainly as a cost-cutting measure. Almost all journalists keep their unused materials on floppy discs, although this is discouraged by the IT department as floppies are said to be virus-prone. Unused materials are either discarded or left in raw form in the reporters' personal notebooks<sup>9</sup>. As for the filed stories, they are kept on the LAN until the editors feel they are not needed any more, and then they are deleted. The file names of such stories are recorded on A4 paper and stored in hard copy folders. These records are kept by the editor and other sectional heads. Some stories which are not published due to space constraints are not stored in the library, and are usually deleted after some time to create space.

At any given time, the news editor goes through the Register and reads the stories after they have been saved on the LAN. He/she may call the reporter to seek clarification or advise them on how to improve certain aspects of their writing before approving it for publication. Once approved, the news editor writes down the file name of the story and indicates the page on which it must appear before forwarding it to the associate editor, who also doubles as the chief sub-editor. The associate editor's work is basically to distribute the stories to the sub-editors for layout design. The sub-editors use a variety of software for their design, including Adobe PageMaker, Photoshop and Quark Xpress<sup>10</sup>. After the stories have been laid down and approved by the chief sub-editor, the news editor is given an A2 dummy newspaper copy for comments and approval.

However, some stories, which are highly rated and considered front page material are kept aside

until 4pm when a special meeting is convened to decide which of the stories goes to which page. This meeting is attended by the managing editor, the editor, the news editor, the associate editor, and the chief photographer. Each of the members at the meeting gets a printed A4 copy of the story. The chief photographer also brings the pictures associated with the stories printed out in black and white on A4 paper. After this meeting, the associate editor takes the stories to the sub-editors for final layout and creation of dummies. Afterwards, the dummies are sent to graphic designers to ensure that the pages meet with the approved standards of The Guardian. From the graphic designers, the pages are printed on A2 size paper and are sent to the proofreaders and then back to the associate editor for comments. The editor has the final say on the pages and to indicate approval, she signs her initials on every page and these are sent to the pre-press department who print the pages on laser film, before they are sent to the printers.

## 4.2 The Website

All the stories that have been approved for publication are also copied to the IT department for uploading on the website on A2 size paper. The IT department uses Macromedia Dreamweaver software to design pages for the website. The department usually re-packages them by removing pictures on those stories that have more than one picture to enable faster uploading and downloading<sup>11</sup>. There is a separate picture gallery in the website for all those pictures that are removed. Although the uploading process can be done more or less at the same time when the newspaper is being printed, this is deliberately delayed so that stories start appearing by midnight so that online readers are not confused as to which day's stories they may be reading. While uploading, the stories are categorised in the same way they appear in the hardcopy version i.e. news, business,

and sports. There is also a facility on the website where one can access all the stories that are available from the stable under two broad categories, “English stories” and “KiSwahili stories”. These stories are grouped together randomly regardless of the newspaper they originally appeared.

### 4.3 Content, knowledge and asset management at The Guardian

According to the responses I got, most interviewees at The Guardian consider anything published in their newspaper as knowledge. “Since ours is a quality newspaper, whatever we publish is useful to a particular reader. Any information that a person may find useful is knowledge”<sup>12</sup>. The following sections present an outline of how the newspaper manages its information assets.

#### 4.3.1 Sources

Reporters keep their source contact details in their personal mobile address books, and for the hardcopy ones (such as business cards), they are kept under lock and key in the individual journalists’ desk drawers and notebooks<sup>13</sup>. Generally, most reporters expressed the belief that one’s contacts are personal property and can only be shared with others only if they wish to. In some extreme cases, it was revealed to me that journalists who do not have good personal relationships with each other normally refuse to share source details even when requested. In the final analysis, the organisation is the one that stands to lose in such scenario, since this implies that whenever a reporter decides to leave the organisation, he/she leaves with their sources which were cultivated using organisational resources.

The editor of The Guardian cites an example where she needed to establish the details of an accident which involved two buses from the Dar-

es-Salaam regional police commander late in one evening, but the commander refused to divulge any information, insisting that a certain reporter had to call him if The Guardian needed the story. As a result, The Guardian missed the story as the preferred journalist was out of station at that particular time. The reporter managed to file this story later on but it was too late and it could only be published in the low-circulation KiSwahili daily, Nipashe. To get round this, the editor says the newspaper now keeps some contacts of alternative sources in a common address book, but she said these are not enough as they are mainly of government officials and other public figures, whose details are easy to get in the first place. This address book is kept by the switchboard operator in the reception area.

#### 4.3.2 Stories

For the published stories, there is a library for keeping all such materials (as will be discussed below). However, it was also revealed to me by all journalists I talked to that they keep newspaper cuttings of their own stories at home. There are several reasons as to why they did this; chief among them was that they wanted to use them as reference materials and portfolios when looking for jobs elsewhere. Some stored such articles on floppy discs, which are also kept at home. Bigger storage devices such as flash sticks are not common among journalists at The Guardian.

#### 4.3.3 Reference materials

With regards to the style book, most journalists said that they consulted it when they had just joined the organisation. The editor expressed concern about this, saying that most journalists who have been with the organisation for a long time still have not grasped it in its entirety. The style-books are kept by staff such as the editor and are available on request. A dictionary and a thesaurus



are also available for consultation. Both are available on each editor's desk and in the library. A telephone directory is also available in the library, as well as in the reception, where the switchboard operator sits. Geographical maps and other materials such as journals are also kept in the library.

#### 4.4 The Library

A library is a central resource for managing the organisation's content, knowledge and information assets. Centrally located on the floor just above the newsroom, The Guardian's library is spacious affair that can sit up to twelve people. However, it does not have even a single computer, let alone a photocopier, printer, or scanner. This means that whoever needs material from the library, they have to read it there since it is not permitted to take any material out of the library, even for photocopying<sup>14</sup>. Thus, most journalists visit the library either to do some quick background research, or to read competitor newspapers such as Mwanainchi, the Citizen, Daily Nation, and Majira. The public is allowed to access the library free of charge, although they have to get special permission to take out any materials for private perusal. The library is run by an assistant librarian who helps to classify, file, store information and provide general help to users on a daily basis. The chief librarian also doubles up as the administration manager, thus his office is on the ground floor.

The library mainly stores the content that is produced by all the newspapers under The Guardian Limited Publications stable. These are stored in two formats, as cuttings and as bound copies of the whole newspaper. The cuttings are stored in different subject categories such as HIV/AIDS, elections, and politics, among others. These are not separated according to which newspaper in the stable they appeared in. For instance, a story about corruption that appeared in the English language Financial Times and The Guardian and

another such story that was published in the Swahili language Nipashe, are all filed together in one folder. This means that for people to get a particular story on a particular subject category, they have to go through the whole bunch of stories that were published by all newspapers in the stable under that subject. However, the chief librarian says they are looking for possibilities of acquiring a new computer-based archiving system, although he was not sure when this will be implemented, since they were still waiting for quotations from suppliers in Europe.

For the bound copies, all the issues of the newspapers in the stable are piled together in the library until the end of the month, and then they are bound and stored on the shelves. The same system is used for non-IPP Media newspapers and magazines that are available in the library.

To complement the library's archives, published stories are also stored on The Guardian website found on the URL <http://www.ippmedia.com>. However, it is important to note that not every story that is published is uploaded and archived on the website, meaning that some of the material is lost over time. At the time of carrying out this research, feature articles were only saved for a period of about one month, and then erased to create space for news stories. The IT manager revealed that he is trying to convince senior management to acquire more space and software that "will allow us to save all material on the website for years to come"<sup>15</sup>.

Analogue photos also form a big part of what is filed, categorised and stored in The Guardian library. Pictures are also subject-categorised in the same way newspaper articles are. There is, however, a different system to storing digital photos. The chief photographer handles pictures for all the nine publications in the stable. This is discussed in detail in the next section.

## 4.5 Digital Photography

The Guardian recently introduced digital cameras such as Mavica to save on the time wasted with the darkroom processes of producing pictorial data. However, although this was a major technological improvement, management, it seems, did not anticipate that they were creating more storage problems than they could handle. For one, before embarking on phasing out the analogue photography system, the photographic department did not have a digital photography storage and retrieval system in place. As a result, commotion ensued and the whole organisation is actually now facing challenges that are putting a strain on its workflow system:

*Digital photographs and all electronic images are very difficult to store at the moment. We shifted to digital cameras without a plan of storing them. Digital photographs come in so fast yet we lack proper archiving systems. This leads to continuous data loss and confusion*<sup>16</sup>.

When photographers return from the field, they all report to the chief photographer's desk, which is located in one of the rooms found at the foot of the newsroom. This room is adjacent to the IT department and was one which was originally used as the darkroom. The pictures are then downloaded onto a PC where they are edited and captioned using Adobe Photoshop. They are then saved on the general server (which can be accessed by everyone in the newsroom) in JPEG format in a folder named "Picha" ('Picha' is the KiSwahili word for 'picture'). The "Picha" folder has several other smaller sub-folders such as "Today's Photos", where all the day's pictures are saved. All pictures in the "Today's Photos" folder are moved to another folder every new day to avoid mixing them up with the incoming new photos.

All pictures that are deemed important for future

use are left on the server until such a time when the chief photographer feels that they should be removed to create space for new ones. He does this by copying all the old photos (as they are saved in their folders) onto compact discs (CDs) and they are then taken to the library for storage. This system has, however, presented some challenges since pictures that are saved on CDs are not categorised in the same way as the analogue photographs are. They are not saved in categories like sports, politics, etc., like the analogue ones, but simply using dates. Thus, it becomes doubly difficult to search through them unless one knows the exact dates on which the photographs were taken. CDs can also be unreliable as modes of data storage as a single scratch on them can render them unreadable on the computer, thus data is lost. To get round this, the organisation had earlier decided to use memory chips but this turned out to be an expensive choice since many of the chips they had bought had a low storage capacity<sup>17</sup>. However, by the time this study was carried out, it was revealed that the organisation had contacted some consultants in Europe to advise them on an archiving system to adopt for their all their photos. It is said that the consultants recommended Photo Station Pro software and had availed them a trial version, which the chief photographer was actually trying out at the time. The chief photographer also revealed that the Computer Science Department of the University of Dar-es-Salaam has also been invited by The Guardian to study the situation with a view to either design or recommend a suitable system for use in the newsroom.

The Guardian does not charge members of the public to make copies of its photographs. Only special permission – which can be granted by the administrator – is enough for one to get a copy of any picture they want. The only other requirement is that the person promises to acknowledge newspaper whenever they use the picture for commercial or any other public purposes<sup>18</sup>.

## 5. Recommendations

This section deals with findings and recommendations emanating from the study. It deals with issues regarding ensuring internet access for all, specialised training on computer use, improved archiving systems for the website, the computerisation of the library and the introduction of a policy on sharing source contact details.

### 5.1 Internet access

There is generally minimal use for the internet in The Guardian newsroom. This lack of enthusiasm for the internet as a tool for data collection and transfer was even expressed by those in the 'swivel leather chairs' category who have full access to the internet. In addition, the whole newsroom does not have an intranet email facility and the editor revealed that for communication purposes, most staffers preferred to use word of mouth (face-to-face or by phone), or writing memos. Some respondents said that they did not use the internet at all due to poor connectivity, which is not only slow, but is also prone to constant breakdowns. It is my first recommendation that this culture must end, and the organisation, in order to stay ahead of the pack in a fast-changing media environment, must make sure that internet is accessible to all in the newsroom and not be a privilege of a chosen few. This would also improve the quality of the content produced in the newsroom as a lot of research can be easily carried out via the internet. This would go a long way in countering the negative aspects of the manual library research facilities. However, stringent policies on internet use should be put in place so that the users do not abuse it.

### 5.2 Specialised training on computer use

There is also a general lack of knowledge on how

to exploit the computer systems available in The Guardian newsroom. Even some of the senior staff still find problems doing basic things on their computers like accessing the internet while others "cannot even open their email accounts"<sup>19</sup>. There is need, therefore, to conduct specialised training on how to utilise the basic technologies available in the newsroom.

### 5.3 Computerisation of the library

The Guardian should make library computerisation a priority so that information can easily be archived and retrieved. The current manual storage systems are costing the organisation a lot of money and business opportunities in lost time spent by reporters searching for small bits of information. A computerised library would lead to an improvement in the quality of stories produced by journalists since it would mean that they now have all the information (and time) they may need to produce well-rounded articles. This would, in turn, be matched by increased credibility and efficiency – which can also translate into revenue in terms of increased sales for the organisation.

A subscription fee can also be introduced for the general public to access the library and this money can be used to subsidise the maintenance of the system. Secondly, there is a need to centralise all library related services, such as the storage of digital photos, as opposed to the current situation where they are kept in the chief photographer's desk. In addition, photocopying, scanning, and printing services should be introduced in the library so as to protect library materials from being damaged or lost when they are loaned out.

### 5.4 The website

The Guardian website boasts of a search feature, which allows visitors to easily locate the published stories they are looking for. However, feature

articles are not archived in the same way as news, business, and sports stories are. This means that after some unspecified period, the feature articles can no longer be accessed. There is need to improve the website database so that whatever is published on the web is archived and is easily available. In turn, the whole publishing network could consider a content management system that would enable a seamless and automated conversion of print content to online, and also for improved electronic archiving.

## 5.5 Managing contacts

All journalists should be encouraged to openly share the contacts of their sources in order to avoid situations where the newspaper loses out on scoops. The personalisation of sources by journalists can be reduced by encouraging all journalists to contribute at least four source names and contact details per month to a common and easily accessible source address book.

## 6. Conclusion

This chapter provided an analysis of the newsroom flow processes at The Guardian newspaper in Tanzania. It has detailed these workflow procedures as well as discussing the content, knowledge and informational asset management systems in the newspaper. The chapter also offered recommendations on how the organisation can improve on its knowledge production and management systems. In addition to the training journalists on internet usage and the computerisation of the library, one of the major recommendations that the chapter offered was that The Guardian could consider introducing a content management system that allows for the automated conversion of content from print to online, and also allows for advanced electronic archiving.

## Footnotes

<sup>1</sup> Interview with the editor, Ms Mercyline Masha.

<sup>2</sup> *ibid.*

<sup>3</sup> Interviews with Felix Andrew and Lydia Shekighenda, reporters.

<sup>4</sup> Interviews with Felix Andrew and Lydia Shekighenda (reporters) and the editor, Mercyline Masha.

<sup>5</sup> Interviews with Felix Andrew.

<sup>6</sup> Interview with IT manager, Thomas Kilumbi.

<sup>7</sup> *ibid.*

<sup>8</sup> *ibid.*

<sup>9</sup> Interviews with Felix Andrew and Lydia Shekighenda.

<sup>10</sup> Interview with IT manager, Thomas Kilumbi.

<sup>11</sup> *ibid.*

<sup>12</sup> Interview with the Chief Photographer, Emmanuel Kwitema.

<sup>13</sup> Interviews with Felix Andrew and Lydia Shekighenda.

<sup>14</sup> Interview with Gaspa Uiso, the Chief Librarian.

<sup>15</sup> Interview with Thomas Kilumbi.

<sup>16</sup> Interview with Emmanuel Kwitema, the Chief Photographer.

<sup>17</sup> *ibid.*

<sup>18</sup> *ibid.*

<sup>19</sup> Interview with Thomas Kilumbi.

# Chapter 6:

## The Daily Monitor, Uganda by Denis Jjuuko

### 1. Introduction

The chapter focuses on information flows in The Daily Monitor newsroom, with a view to outlining what counts as knowledge assets in the organisation and how they are used and managed. It provides descriptions of the stages of copy flow, including sources and inputs, destinations, and technologies used, in order to provide a comprehensive picture of The Daily Monitor's content and knowledge management systems. The library, which is identified as a central area for managing the organisation's knowledge and informational assets, is also discussed in detail before concluding with findings and recommendations.

### 2. Brief history of The Daily Monitor

The Daily Monitor, previously known as The Monitor until June 2005, is one of the only two English daily newspapers in Uganda. Its headquarters are in the country's capital, Kampala. The newspaper is owned by The Monitor Publications Limited, a privately-owned media company which also owns The Sunday Monitor and KFM, a commercial FM radio station, and The Monitor Business Directory. Monitor Publications Limited is a subsidiary of the Nairobi-based East African media conglomerate, the Nation Media Group (NMG), which owns majority shares.

The newspaper started as a weekly when a group of Ugandan journalists quit the Weekly Topic, to establish The Monitor in 1992. In 2002, the

journalists sold their majority stake to the NMG. However, they all retained a minority shareholding in the entity up to today. The Daily Monitor is usually considered an 'independent' newspaper mainly because of its private ownership, as opposed to rivals The New Vision, in which the government holds 80% shareholding interest (the remaining 20% is owned by the public).

The editorial department of The Daily Monitor is led by an executive editor, deputised by the managing editor with a line of editors who directly report to the latter. Structurally, the editorial department has specialised departments including news, features, business, and sports. Features is further divided into different subsections such as education, society (coffee break), women, and politics.

### 3. Methodology

The study used a combination of observation and semi-structured interview techniques. Although getting official permission from the executive editor was troublesome due to the government's decision to close KFM and detain popular talk show host Andrew Mwenda at the time I was due to conduct the research, accessing The Daily Monitor newsroom for pilot observations was never a problem because I had once worked in the newspaper before. However, I was only granted permission to conduct the study after the commotion caused by the closure KFM had subsided.

The executive editor introduced me to the training editor, who was to facilitate my interviews and observations.

The observations were carried out over two days, with morning sessions dedicated to attending newsgathering preparations like diary meetings and general interaction with staff. These observations informed an integral part of my findings as I was able to see, first-hand, the workflow processes of news production at The Monitor. Two hours were set aside for library visits on a daily basis. Semi-structured interviews were undertaken to supplement my observation findings. To this end, selected interviews were carried out with the assistant news editor, two reporters, the librarian and the IT manager. The interviews were carried out over a five-day period.

## 4. Discussion of findings

The first focus of my findings will be on technical descriptions of the workflow processes of news production in the organisation. There are different processes of gathering information at The Daily Monitor, depending on the different sections of the newspaper, such as news desk, features and sports. The news desk section starts with the morning diary session while features conducts weekly meetings and depends more on the creativity and 'chatty' writing styles of its reporters. This section will highlight the workflow processes from both news and features sections. The sports and business sections are not different from the news desk.

### 4.1 Workflow processes: News desk

#### 4.1.1 Diary meetings

The process begins with a diary meeting which is chaired by news editor. It is held every weekday at 08.30am. The meeting is attended by about 25

reporters, both the full time ones and the free-lancers. Occasionally, the executive editor and his deputy attend as well. It lasts for approximately half-an hour.

The purpose of the diary meeting is to share story ideas and tips. Every reporter is expected to make a contribution. The person who brings up a story idea does not necessarily have to be the one to follow up the story, since the news editor can allocate it to someone else for various reasons. However, I observed that many reporters do not to share many of their story ideas in this session, preferring instead to personally discuss them with the editor soon after the meeting. The reasons for this are varied, as the news editor pointed out:

*Basically, some reporters feel that if the story is sensitive and could be an exclusive, they rather keep it between themselves and editors as they fear to be scooped... The diary session is mainly to discuss 'obvious' stories and to ensure that all press conferences and other calendar events are covered.*

The meeting also includes a brief review of the day's newspaper to see whether there are any stories that need follow-ups, or need to be approached from different angles. All the times, the need to strictly follow The Daily Monitor house style is emphasised.

#### 4.1.2 Sources

One reporter said that the easiest way to build up a solid base of sources is simply to be around the newsroom to pick up the phone when people call in with news tips. The source contact details are usually kept in journalists' notebooks; mobile phone and email address books; and as hard copy in case of business cards. One journalist explained: "How important the source is in executing my duties determines where I keep their contact de-

tails... those that are crucial I keep in my personal mobile phone address book, while the rest kept in either business card holders or my notebook". Hard copy source details are always kept under lock-and-key by each reporter in their desk drawers in the newsroom. While a few reporters admitted to keeping some source contact details on their email address books, they revealed that this method was not reliable as the internet could be offline when they need the details urgently. Some journalists cited the lack of enough workstations in the newsroom as a deterrent to saving their source details electronically.

There seems to be some general consensus in The Daily Monitor newsroom that one's contacts are personal property and can only be shared if the 'owner' wishes to. This means that in cases where a reporter quits the media house, he would leave with all his contacts. To get around this, the assistant news editor said that his desk keeps some contact details of sources, but these are only of government officials, members of parliament and other public figures, whose details are very easy to get in the first place. He argued that it is a bit difficult to stop the system of journalists "hoarding" or personalising contact details of crucial sources as some sources themselves insist that nobody should call them except a particular journalist. This is said to be a result of lack of trust in some journalists by some sources, especially those sources who work in government security agencies.

#### 4.1.3 Data gathering tools

Journalists at The Daily Monitor use a plethora of tools to collect data for stories, these range from mobile phones, to emails and press releases. After the diary meeting, most reporters go through their individual diaries to check for calendar events. For instance, senior court reporter Solomon Muyita said he has to go through his diary so

that he does not miss important trial proceedings happening around the country. He also calls his regular sources such as court clerks, lawyers, and police officers attached to the judiciary for any upcoming big trials.

Web-based email services such as yahoo and hotmail, the intranet email system (via Microsoft Express), and Short Message Services (SMS) are other popular information gathering tools among journalists. Emails are mainly used to communicate with public relations officers of corporate bodies and communication officers of Non-Governmental Organisations (NGOs), while SMSes are used mainly as reminders for media events. For example, while conducting my interview with Muyita, a source sent him an SMS, which read: "Hi, the UHRC [Uganda Human Rights Commission] court will deliver a decision on a case between the late Mamonero's wife vs. the AG [Attorney General]. Case is about Mamonero on 30/08/05 @ 9.30am @ UHRC. C U [See You]." The SMS was sent to Muyita's mobile phone through the service provider's (Uganda Telecom) free email-SMS feature by a close source. He immediately bookmarked the SMS as a reminder on his mobile phone. There are also other sources who call particular reporters and a number who 'beep' or send 'call back' requests if they have some information they want to share with the reporters. Other tools of gathering data such as faxes, ordinary mail and personal mail are not widely used, as they are considered "too slow". At The Daily Monitor, there is one central location for received faxes, so it is easy to miss one's fax especially if the office assistants do not bring it to your desk<sup>1</sup>.

Freelancers who are based in Kampala are allowed to use office facilities including intranet, fax, computers and telephones to gather data. However, they are only allowed to use such facilities if their respective editors consider their contribution (article submissions) as being vital

to the organisation. For the reporters based in the bureaux around the country, their main form of communication with the Kampala office is via email. Bureaux reporters report to the bureau chief who assigns them stories in the same way the news editor does at the head office. After they have compiled their stories, they forward them to bureaux chiefs who, upon approval, email them to the news editor (or any relevant sectional editor) in Kampala. Pictures go through the same process. Before email facilities became popular, stories used to be sent via facsimile and courier services.

#### 4.1.4 Description of stages of copy flow

Once a reporter has gathered all the data that is needed, the story is typed on newsroom personal computers (PCs) using the common word processors such as Microsoft Word. After typing, it is passed on to the news editor at a deadline agreed upon by the two. The story has to be saved on the Local Area Network (LAN), which is an HP Starpolo Network Server in text file format, and a hard copy is printed from centralised black and white laser printer before being submitted to the news editor<sup>2</sup>. In instances when the printer is faulty, the story is sent via email. Although usually this means the work of the reporter ends here, all reporters are required to remain on standby in case some of their stories need to be re-worked or patched up. In such instances, depending on where the particular journalist will be at the time, many modes of communication are used to call them back. This includes anything from calling of his/her mobile phone, or fixed phone, or sending an email or just word of mouth around the newsroom<sup>3</sup>.

The news editor reads through all the stories and passes on those he approves of, either as hard copy or soft copy, together with an A4 size newspaper dummy to the sub-editors to begin lay out. Depending on the length and quality of the story,

the news editor may cut it down before forwarding it for lay out. The sub-editors usually use Quark Xpress software for lay out, although at times Adobe Photoshop and Illustrator are also used<sup>4</sup>. After laying the stories, the sub-editors send a copy of the newspaper printed A3 size paper (which is the actual size of The Daily Monitor) to the respective line editors for approval. Once approved, all the pages are then forwarded to the pre-press section with the editor's signature on them to indicate final approval to go for print preparations. From pre-press, the articles are printed on newsprint using Soft Touch software. All stories that are sent to the pre-press section are saved on the LAN with the signed copies providing proof that the stories have been 'okayed' for publication by the various line editors. Those stories which are not passed are left unsigned. All the copies sent to the pre-press are also copied to the executive editor. However, some prominent stories, such as those which could be used as leads on pages such as the "front one", or "P1" (as they are fondly called in the newsroom), are kept by the news editor until 6pm when a meeting between the news editor, executive editor, managing editor and photo editor commences to make final decisions as to which story goes to which page<sup>5</sup>.

There are also some rules governing the workflow processes at this newspaper such as adherence to the stylebook and ensuring that the United Kingdom English is used as the language for writing stories. Reporters are also encouraged to make use of other resources such as dictionaries and thesauruses, which are housed in the library.

#### 4.2 Workflow processes: Features section

The workflow processes the features reporters go through are somewhat different from those of the news desk. During the study, an entertainment feature reporter was selected to provide me with



an insight into world of feature writing.

### 4.2.1 Data gathering and sources

In the features section, there is more reliance on collecting information on a wide range of sources, including close observation of promotional materials such as posters, fliers, banners and billboards, among others. Invitations to concerts and regular in-house meetings with the various entertainers and writers also form a central part of gathering information for feature articles<sup>6</sup>. The Daily Monitor has a policy of showcasing new local artistes which requires that journalists in the section are not only in constant touch with the music production studios and the musicians themselves, but also that they are listening to the various FM radio stations and watching TV music programmes for review purposes.

Like in the news section, there is also a heavy dependence on mobile phones as tools of gathering data for articles. However, mobile phones are only used to set up or confirm appointments and also to double-check facts during the write-up process. SMSes are also used to communicate to already established artistes mainly for the same purposes. With the recent introduction of 2.5G by telecommunication company MTN Uganda, that allows for picture messaging, some artistes have tried sending photos of their shows to the newsroom, but these have been largely unused due to the poor picture resolution. Faxes are also unpopular with features writers as they are considered “dinosaur technology”<sup>7</sup>. Some organisations such as the British Council do send press releases via fax but they are not as effective: “Apart from getting lost, sometimes the quality of the print is so poor you cannot read anything,” Moses revealed. Instead, email is the preferred tool of choice for gathering data, especially with corporate bodies and NGOs. Email is also used for conducting interviews with artistes who are in the Diaspora, as it is much

cheaper and more reliable<sup>8</sup>.

### 4.2.2 Notebooks

For manual means of news gathering, all journalists are provided with shorthand notebooks. However, there seems to be no standardised method for taking care of these notebooks as it appears that whether these are kept in personal lockable desk drawers or are left lying around the newsroom tables entirely depends on the individual reporter. Nevertheless, there is a rarely-implemented policy directive to the effect that all notebooks should be kept safely for a period of up to three months after they are used up in case there are litigations against the newspaper<sup>9</sup>. However, since there are no proper filing systems for the notebooks, this directive is never really implemented. In addition, some journalists revealed that they still preferred to keep their raw data in their notebooks as they fear such information may be lost if it is kept on computers as, more often than not, the IT department deletes some data without notice, ostensibly to create space on the network. However, the IT Manager revealed that the clean-up exercise is rarely carried out as the 40 Terabyte space on the LAN is more than enough for the newspaper’s storage needs. He, however, pointed out that because the network does not boast of a top-notch search engine facility, journalists find it rather tedious to go through individual files to get what they want, especially as most of these files are not saved with proper names. As a result, some reporters have resorted to recording their interviews on personal laptops, which they keep at home.

### 4.2.3 Description of stages of copy flow

After the feature writers have gathered their required data, the articles are typed on the newsroom PCs using Microsoft Word. The reporters are required to keep all articles within a 500 to

800 word range so that the reader's interest is sustained. However, there are other special stories that are allowed to go beyond this limit.

Each section in The Daily Monitor newsroom has a folder on the LAN where all journalists save their work. For example, news reporters save their stories in the "News" folder, which they also share with the news desk of the Sunday Monitor. Although the general policy is to print a hard copy and drop it in the relevant line editor's "In" tray, most reporters prefer to email their stories directly to the editors using the intranet. Like in news section, sometimes the story moves back and forth between the reporter and the editor to ensure that all the relevant details are included. This is mainly done via email, by phone and most of the times, by word of mouth between the editor and the concerned reporter<sup>10</sup>. The features editor usually checks the articles for factuality before he forwarded them to the sub-editors for lay out. From here, the material goes through the same stages as those of the news section. However, unlike in the news section, features editors are also required to help the sub-editors lay out the articles. The reasons for this were not explained to this researcher.

#### 4.3 The website

All the stories that the editor has approved for publication are also copied to the online editor for uploading on The Daily Monitor's site (<http://www.monitor.co.ug>). However, because these are sent as prints on A3 size paper, the online editor has to extract and re-package them (using Macromedia Dreamweaver and Microsoft FrontPage software) and removing some pictures on those stories that have more than one picture. This is done to enable for faster downloading for online readers. However, there is no clear policy on how many pictures should be removed per story. Some stories that appear with pictures in

the print edition may not carry any pictures in the online version, and vice-versa. Although the uploading process can be done more or less at the same time when the newspaper is being printed, this is deliberately delayed so that stories start appearing by midnight so that readers are not confused as to which day's stories they may be reading. However, a major handicap with the website is that it does not have a feature which enables one to search for specific information by date of publication. The IT Manager admitted that the Monitor Online archiving system does not measure up to basic standards, and said that there were plans to redesign it to make more useful.

#### 4.4 Content, knowledge and asset management at The Daily Monitor

Most journalists said that the shortage of computers in the newsroom has limited their capacity to store and manage their information effectively. Thus, in most cases, the raw data that journalists get from sources such as interview transcripts are kept in the journalists' personal notebooks, with a few journalists storing the data on personal DAT discs, cassettes and personal laptops. As regards material that is published, most is kept at the library (see 4.5 below), but it is a common practice among journalists to keep newspaper cuttings of their own stories at their homes as portfolios, while some of the tech-savvy tend to store them in the public hubs available on news portals such as [www.allafrica.com](http://www.allafrica.com)<sup>11</sup>. Others store electronic copies of their stories on flash sticks and I noted that most journalists no longer used floppy diskettes because they are considered unreliable and prone to corruption.

Most journalists admitted to having followed The Daily Monitor's stylebook "religiously" when they were still new to the organisation. Once they got the hang of it, they revealed, they rarely consulted it, although I noted that sub-editors regularly

consulted it when doing edit and lay out. However, some of the interviewees did not see the stylebook as a knowledge management (KM) issue because “it only contains rudiments on how to make a story look great. The dictionary is more of [a tool for] knowledge [management] because you learn a lot from it”<sup>12</sup>. The stylebooks are kept by staff such as the training editor, although anyone can own a copy if they ask. In addition, the interviewees collectively said that all that is published in the newspaper is knowledge, although this also depended on the reader. They said they believed that when interviews are made, what is captured is also knowledge.

Although each section in the newsroom has a hard copy dictionary, the web-based [www.dictionary.com](http://www.dictionary.com) enjoys wide popularity with journalists, especially from the features section. It is unclear why this online dictionary is not popular in news section but the most common answer is that features journalists have more favourable deadlines than their news counterparts do. The directories are kept in a centrally located place for easy access. Geographical maps and other materials such as journals are kept in the library, which is located on the floor that houses the features section and the Sunday Monitor. The following section discusses the role the library plays in KM at The Daily Monitor.

## 4.5 The Library

The library is a central base in the organisation’s management of content, knowledge information assets. The Daily Monitor library is centrally located so that journalists from both the daily newspaper and its sister publication can get to it without any hassle. It is a small library that sits five people maximum and a librarian and her assistant. One of the respondents said that the library is considered “more of a store than a library” to signal the way in which journalists use it to get the basic materi-

als they need in order to produce content for the organisation. It is equipped with a photocopier, a scanner and two computers. It also boasts an internal telephone line, which is considered more effective for communicating with journalists in the newsroom than email. Most journalists visit the library either to consult some references, or read other newspapers such as The New Vision. The general public is also allowed to use the library for research purposes gratis.

The librarian and her assistant work daily to classify, file, store and retrieve information manually as there are no computer systems in place for that purpose. Although The Daily Monitor’s library contains various forms of information such as encyclopaedias, history books and country reports among others, a major part of the library is set aside for the storage of the news that the media organisation produces on a daily basis. Other local and regional newspapers and magazines that circulate in the country are also stored. The Daily Monitor newspaper is stored in two formats; as cuttings and as bound copies of the whole newspaper. The cuttings are classified into different categories such as politics, lifestyle, police, crime, education, army, social, districts, cabinet, the presidency, parliament, culture, children, and so on. According to the librarian, they recently introduced the idea of keep cuttings as a way of easing the burden of retrieving information, as the company was in no financial position to resort to computerised storage<sup>13</sup>. However, it was later revealed that there are plans “in the near future” to computerise the library by acquiring the Documentum software that makes data storage and retrieval much easier<sup>14</sup>. The Daily Monitor issues are piled in a filing folder until the end of the month when they are bound together. Other newspapers and magazines are only kept in the library for a limited period before they are transferred into the store, this being attributed to space constraints. The store is accessed upon request and using it

can be time-consuming as there is no full-time attendant or helper.

The manual system of storing and retrieving data is obviously not appreciated by the end-users, especially the journalists who complain that a lot of time is spent searching for small bits of information in the middle of their often busy schedules. It becomes more difficult to locate information the further back it was published, unless the user has the exact knowledge of the year and month such information was originally published. This is compounded by the possibility of human error, where, for example, the librarian's assistant simply forgets to cut and paste a certain article. Yet what would have been a solution, the online version of The Daily Monitor is also unreliable, as been noted above.

Pictures also form a big part of the material found in the library. The pictures are also categorised in the same way newspaper articles are. It would seem that The Daily Monitor is more efficient in the storage of physical (analogue) photographs than with electronic (digital) ones. The difficulty in storing and (especially) retrieving digital photographic data emanates from the fact that the newspaper does not have a systematic archiving system. Again, the IT department said there are working on acquiring new software that will ease the process of classifying, storing and retrieving pictorial data, although no one seem to be sure which software will be used.

At the time of conducting this research, the digital photos were being stored on both the LAN and hard drives on two computers using Adobe Photoshop software<sup>15</sup>. The two PCs have a combined hard drive capacity of 160GB. Classification is done using folders. If any of the editors requests a picture, the librarian searches for and saves it on the computer network. She then informs the particular editor of the file name. Because of the

system's tediousness, it is only a privilege of the editors to make such requests. When the hard drives of the two computers are full, the library staff copy all the photographs onto Compact Discs (CDs) and store them in labelled boxes, which are kept on the library shelves.

## 5. Recommendations

This section deals with findings and recommendations emanating from the study. It deals with issues regarding the policy on managing contacts, computerising the library, training, and regular website uploading. As will be argued, The Daily Monitor faces huge challenges in streamlining its knowledge management policies as the current ones seem uncoordinated and anachronistic to say the least.

### 5.1 Policy on managing contacts

My first recommendation is that journalists at The Daily Monitor should be encouraged to openly share contact details of their sources. It is possible that in situations where one journalist is out of reach, the newspaper can miss an award-winning scoop simply because other journalists do not know how to contact the relevant sources. A whole new culture of knowledge sharing must be introduced in the newsroom, beginning with simple requirements that (for example) all journalists must contribute at least four source names and contact details per month to a common and easily accessible source address book. The editors can introduce a reward mechanism that will encourage journalists to contribute freely to this address book.

### 5.2 The library

The Daily Monitor should make library computerisation a priority so that its journalists can actually look forward to visiting the library for research,

rather than dreading it as is the case right now. The manual archiving and retrieval systems must be done away with as journalists spend more time looking for information than producing it. A computerised library would improve the quality of the stories produced and this can translate to increased demand for the organisation's products. A subscription fee can also be introduced for the general public and such a levy can be ploughed back into the library by buying more computers or up-to-date software.

### 5.3 Training

In addition to investing in computer hardware itself, The Daily Monitor needs to carry out regular and sustained specialised training programmes for all staff members on how to exploit the ICTs that are useful in their practice for the benefit of the organisation. Clearly, the organisation has poorly implemented policies on the use of internet. For example, there are not written rules on using the internet for accessing sensitive websites (such as those that place cookies on the browser's computer, or clog screens with pop up adverts). There are also no regulations on the use of the facilities for non-commissioned work. The company's internet system is highly prone to abuse largely because monitoring is done physically by the staff of the IT department. Secondly, there is general lack of knowledge by the journalists on how to maximally utilise the IT systems at their disposal. There is a need, therefore, to ensure that these policies are properly implemented.

### 5.4 The website

The website's uploading process needs to be systematic and standardised. In addition, the archiving set-up needs to be revised to ensure that users are able to easily retrieve the needed information. This may involve the installation of a powerful, yet easy-to-use search engine on the

site, which can allow for advanced search modes such as by keywords, by date of publication, or by subject, etc. A well-archived website works to complement the organisation's library archives. Also, a subscription service could be introduced for the site. This service can either charge a minimal fee per year or be free of charge. A free subscription service allows the newspaper to get the demographic details of its readers. This information may be used to source targeted advertising.

## 6. Conclusion

The chapter has provided a brief historical background of The Daily Monitor, which is based in Uganda. It offered descriptions of the news and features sections workflow processes (as well as the library and the website), as a way of analysing the content, knowledge, asset and other informational management practices and policies of the news organisation. I argued that the majority of the KM policies currently existing at The Daily Monitor are uncoordinated and anachronistic to say the least, and thus, they need an urgent overhaul. On the major recommendations emanating from the study was that the news organisation needs to invest in the digitisation of its newsroom, including training staff on the efficient use of ICTs in order for the newspaper to be able to manage its informational assets effectively. It was also recommended that the organisation has to re-look its archiving systems – both online and offline – in order to empower its journalists to produce well-researched content and to preserve the knowledge that it produces on a daily basis.

## Footnotes

<sup>1</sup> Interview with Senior Court Reporter, Solomon Muyita.

<sup>2</sup> Interview with IT Manager, Peter Omedo.

<sup>3</sup> Interview with Senior Court Reporter, Solomon Muyita.

<sup>4</sup> Interview with IT Manager, Peter Omedo.

<sup>5</sup> Interview with Assistant News Editor.

<sup>6</sup> Interview with features reporter, Moses Serugo.

<sup>7</sup> *ibid.*

<sup>8</sup> *ibid.*

<sup>9</sup> *ibid.*

<sup>10</sup> Interviews with Solomon Muyita and Moses Serugo.

<sup>11</sup> Interview with features reporter, Moses Serugo.

<sup>12</sup> *ibid.*

<sup>13</sup> Interview with Librarian Aida Nakuya.

<sup>14</sup> Interview with IT Manager Peter Omedo.

<sup>15</sup> Interviews with Peter Omedo and Aida Nakuya.

# Chapter 7:

## The Zambian Post, Zambia by Alphonsius Hamachila

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### 1. Introduction

The study focuses on knowledge creation and management, and addresses stages of knowledge generation, codification, storage, refinement and distribution in The Post. Although approached from an Information Society framework, the study does not tackle, in depth, the various interpretations of this concept (see Webster, 2000). However, it limits itself to examining newsroom practices at The Post, with particular emphasis on the technological aspects and how these shape the management of the organisation's informational assets. This means that the chapter is also informed by specific theories of internal policy-making and implementation, and thus it explores the inter-relationship between policy and existing knowledge management (KM) and content management practices at the newspaper.

### 2. Brief historical background

The Post, a privately-owned commercial daily newspaper, was founded in 1991 in the wake of Zambia's transformation from one party rule to multiparty politics. It reinforced the role of the media in democracy by contributing to freedom of expression and plurality of information in a country whose press was predominantly state-owned and controlled (Kasoma 2000).

The Post is the only newspaper in Zambia which has heavily invested in information communication technologies ICTs. It was the first newspaper in Zambia to embrace the perceived power of the internet in information gathering and storage (Kasoma 2000:208). With an Information Technology (IT) support unit within the newsroom, The Post is also the only newspaper in the country that provides its journalists with 24-hour access to the internet. In most media organisations in Zambia, the internet is still regarded as a luxury which is made available to only a few unit heads, while reporters have minimal, or no access at all (Kantumoya, 2004).

### 3. Objectives of the study

Since The Post has made valuable gains by exploiting ICTs in its operations, the study seeks to establish how the newspaper manages its existing information assets, and also to find out whether or not it has a content management system that enables efficient workflow processes and multi-platform publishing that extend print content onto web, and other multimedia platforms.

### 4. Significance of the study

The major aim of the study is to provide the baseline information of The Post's usage (or lack

of) of ICTs in its workflow and knowledge management systems (KMS) to pave way for a successful introduction of a new content management system (CMS). This will be achieved by tracking the newsroom information flows, and identifying the stages of turning data into information and eventually into knowledge, and how this knowledge is subsequently managed.

## 5. Methodology

Observations and semi-structured interviews were the two principle techniques the study relied on for data collection. On-site observations of the newspaper's newsroom were used to track the work process flows and information gathering (and storage) techniques at The Post, while paying particular attention to usage of existing technologies. I spent a full week of observation in The Post's newsroom, the IT department, and the library. During this period, I was also allowed to attend the newspaper's editorial (diary) meetings. The observation method gave me insights into newsroom operations, and I was able to ascertain how the newspaper managed its knowledge. By being physically present in the organisation, I had the advantage of being able to witness and record the workflow processes first hand. Observation gives one an opportunity to produce independent assessments of events and processes (Deacon et al., 1999:258-9).

The semi-structured interviews provided data on what newsroom policies, technologies, and systems existed as regards to the flow of information, and how journalists used fax, contact books, mobile phones, computers, and paper filing systems to produce news. I conducted these interviews with the IT Manager (Chris Tshani), the News Editor (Webster Malido), the Librarian (William Nyoni), and three journalists (Kingsley Kaswende, Mwila Nkonge, and Kelvin Chambwa). Before embarking on the more formalised semi-structured

interviews, I first conducted a pilot interview with one respondent. The pilot enabled me to assess the validity of my questions and to project the length of my interviews. Through the pilot, I discovered that some of the questions were repetitive, and the interviews were going to be too long for the journalists who often had hectic daily schedules. I then refined the questions, and trimmed my interview guide appropriately. Semi-structured interviews were employed here because by their nature, they elicit "rich descriptions" and explanations in identifying local contexts (Miles and Huberman 1994:10).

### 5.1 Research Procedure

My first task before going into the field was to ensure that I had access to the newsroom and the journalists I needed to interview. I contacted the relevant authorities at the newspaper and explained clearly the purpose of my intended visit, including what access I was going to require and what disturbance my research might cause. In addition, the research co-ordinator emailed a formal introductory letter to the newspaper's news editor, Webster Malido. Pilot observations were conducted at The Post for two days initially, taking notes and writing down my impressions that were later sent to the research coordinator. I also drew up a list of key informants I wished to interview, and drafted a list of pilot questions to them. I further defined what further observation time and places I would need to unravel the issues and sent all this information to the research co-ordinator for comment.

Once I was given some feedback, I proceeded with the interviews. I made appointments with various respondents at their own time and venues of their own choice and convenience. The IT manager and the news editor were interviewed in their offices while interviews with the librarian, and the journalists were carried out in The Post library. At the



onset of each interview, I explained to the respondents the purpose of the study, thus their consent was obtained in all cases. The semi-structured interviews lasted for a week, and the duration of the interviews ranged between 30 to 45 minutes, and largely depended on the kind of information each interviewee was able to provide.

## 6. Discussion of findings

This section presents the study's findings. The data is presented and discussed concurrently in a narrative form based on four major themes namely: workflow processes, content management, knowledge management and asset management.

### 6.1 Workflow processes

In line with the focus of the study, I investigated stages of information flow, including sources and inputs, destinations and technological issues. This entailed establishing how data and information were gathered, stored, transferred, shared, and published on various platforms by the newspaper. From the newsroom observations, I established that journalists at The Post used a combination of traditional newsgathering techniques such as personal and telephone interviews, and fax; and new ICTs such as the internet and mobile telephony. It was further established that whether gathered by traditional or technologically advanced means, this information was published in both the newspaper's print and online editions. Thus, the findings presented an interesting duality - the highly hyped convergence of traditional and modern information gathering and processing means, and the divergence of content for delivery on a variety of platforms. This duality is discussed in greater detail below.

#### 6.1.1 Diary meetings and sources

I established that the workflow processes at The Post are largely driven by the newspaper staff, and starts with the individual journalist. This was revealed during the daily editorial meetings where journalists were required to present at least three story ideas each for the next day's edition. I found that, in addition to the usual sources of story ideas, such as hard copy press releases and calendar events, each journalist had his/her sources of information, usually cultivated over a long period of time.

Mobile phones were said to be the most useful newsgathering tool by respondents in comparison with the traditional fixed (landline) telephones<sup>1</sup>. I further established that each journalist was provided with a company mobile phone with US\$35 worth of airtime per month. These mobile phones were used to conduct interviews with sources, and also to get news tips via Short Message Services (SMS). All the respondents said they had never used a camera phone for information gathering. Most journalists kept their sources' phone numbers on their mobile phones. Traditional means of gathering data like face-to face interviews were still a common feature of The Post journalists' news gathering strategies, while the fax was often used for sending questions to potential news sources and receiving hard copy press releases. However, ordinary mail was hardly ever used, save for reader feedback for the 'Letters to the Editor' column. The study established that journalists and stringers working outside the capital Lusaka mostly filed their stories via email. At times, however, they would fax or dictate the stories on the phone to fellow journalists in the newsroom in instances where there were operating from areas without internet access.

### 6.1.2 Description of stages of copy flow

Once journalists have collected their data from sources, they typed them onto Macintosh computers in the newsroom. It is at this stage that the information and all other incoming feeds are shared with other users through the newspaper's Local Area Network (LAN), and then subjected to the daily editing process.

The Post's LAN houses four in-house PC servers (the Internet, Editorial, Production and Library Servers) responsible for monitoring the various stages of the workflow process. The Internet Server establishes a 24-hr wireless connection to ZAMNET, the paper's internet Service Provider (ISP). The Editorial Server is where journalists save all their stories and pictures on named raw copy folders. Once a story is put in the raw copy folder, whether published or not, it would be stored electronically by the newspaper's library, accessible by all journalists through the LAN. While the information gathered must adhere to certain guidelines as spelt out in the newspaper's style guide, each submitted piece is evaluated for appropriate content, and edited for grammar. The newspaper's editors then pass the approved stories onto the Production Server for sub-editors to begin lay out.

The lay out is done using the latest Desktop Publishing (DTP) software that includes Quark Xpress, Corel Draw and Adobe Photoshop, also on Macintosh platforms. After lay out, the sub-editors normally print out the completed pages on A4 pages for proofreaders to make corrections. The proof-read pages are then taken back to the production room. Black pages are then printed out on the LaserJet printer on tracing paper, and onto the Image setter on films after colour separation.

For the colour pages, the pages are run through the process of colour separation on film. The film and tracing papers are later taken to the plant

where the printing department makes plates. It is these plates that are placed in the printing machine to produce a complete print edition of the copy of The Post. An electronic version of the newspaper is then placed on the Library Server. The newspaper also has a paper filing system for other incoming hard copy news feeds such as press releases and other news materials. These are stored in the library, whether they were used or not.

### 6.1.3 The Server system

As explained in the preceding subsection, The Post's LAN houses four individual servers, all of them serving different purposes in the production chain. For example, the Internet Server establishes a wireless connection to the newspaper's ISP. This enables all computer users at The Post to access and browse the internet through out the day. While staff at the newspaper use high-quality search and retrieval features for electronic documents on the LAN (as other sections of this paper will show), it is The Post's policy that raw information on the Editorial Server is accessible only to journalists and the news editors, while the edited and approved content in the Production Server is accessible only to the production staff and senior editors. In addition, only library staff has access to the Library Server, where the electronic version of The Post is stored. This restriction, according to the IT Manager, helps avoid any duplication of roles in the newsroom. He also said this helps avoid modifications of the newspaper in the production cycle, and ensure that that the production team comes up with a standardised final product for both the print and online edition. The next section looks at how this final product is repurposed for diverse platforms.

## 6.2 Content Management Systems (CMS)

Regarding content management, the study found that The Post extended its centralised approach to the information production cycles, providing its consumers common access to content. The newspaper's IT manager argued that The Post's goal was to make content easily accessible to all users both inside and outside The Post's premises and via a variety of platforms. He also revealed that the operations of The Post's internal news production system and workflow processes form an integral part of the newspaper's internal CMS. This CMS is anchored on the Editorial, Production, and Library Servers mentioned above, which the staff use to submit content for editing, publishing and storage. It can be argued that The Post's CMS is valuable for recognising the value of content as it applies to making decisions on how (and to whom) that content can be externally packaged and presented.

*The study further established that the newspaper repurposed this content onto The Post's website (designed using a mysql database and PHP), which formed the newspaper's major external CMS. However, as the IT manager noted,*

The process of repurposing the print content on the website is not automated. We do the traditional cutting and pasting of text and pictures, onto our website, and we only refresh the site at a time chosen by us<sup>2</sup>.

The Post uses the same content for both the print and online editions. Whereas the print edition of the newspaper is normally on the streets by 5am every day, the newspaper's website is only be updated by mid-day, sometimes with first paragraphs of headline stories only. According to Tshani, the reason for this delay and the withholding of the full stories was to encourage web browsers to buy the print edition of the newspaper. At the time of

conducting the study, changes were being made to The Post's website, and an archiving system which did not exist before was being installed for users to be able access old editions of the newspaper. The IT manager revealed that the updated archives would include the very first edition of the newspaper which was published 14 years ago. He argued, however, that the process of coming up with, and updating an electronic archive on the newspaper's website would not have been possible if the library had not kept the hard copies of all the newspapers since 1991. It still remains the newspaper's policy that both hard and soft copies of every edition are stored in the library. A glance at the newspaper's website revealed that its current archives only date back to August 2005.

## 6.3 Knowledge management

Postman (2003) defines knowledge as organised information – information that is embedded in some context; information that has a point of view, that leads one to seek further information in order to understand something about the world. According to Webster (2000:27), information is data that has been arranged into meaningful patterns such as words, numbers, and so on, and knowledge as the application and productive use of information. Knowledge and information are, therefore, the keys to productivity in a news organisation as they can be applied to all activities both in production and delivery of goods and services. KM generally refers to the way, and means that organisations create, store, and access or reuse knowledge to accomplish enterprise goals.

Information obtained from the semi-structured interviews revealed that respondents had different understandings of what counted as knowledge from the mass of data, and information that the newspaper collected. Their views were, however, similar to the ones expressed by the authors above, with notable deviations. One respondent put

it this way: “I count as knowledge that which adds value to people’s livelihoods in any way”. Another one argued: “All information that is published is knowledge.” According to the librarian, what counted as knowledge was information on HIV/AIDS, the republican constitution, government, and non-governmental documents. Although telephone directories, dictionaries, and copies of The Post’s style guide were kept in the newsroom, production room, and library for easy reference, almost all the respondents did not consider them as part of knowledge. As Postman (2003:1) argues that these tools are knowledge in the sense that within a telephone directory, a dictionary, and a style guide is organised information – information that is embedded in some context – that can enable new information to be formulated through the application of further information. But it is also important for the purpose of this study to state that while a telephone directory, a dictionary, and a style guide can be considered as knowledge in the workflow process of journalists, they can also be meaningless to other people, like farmers for example.

Further, almost all the respondents treated the library, notebooks, mobile phones and personal diaries, as important tools in managing the newspaper’s knowledge. It was further established that the journalists at The Post kept their news sources’ contact details in their diaries, mobile phones or notebooks, and email addresses were saved on individual journalists’ email accounts. One respondent put it this way:

*The newspaper has no system of maintaining a centralised inventory of sources. If any reporter left The Post for another job, he or she will leave with this database of sources’ contact details<sup>3</sup>.*

After reporters present their story ideas during editorial meetings, all these ideas are recorded onto a central notebook, which is normally kept

in the library, together with an electronic version of the diary meetings. Each journalist was availed with a notebook where interview transcripts and other details were kept. There is an unwritten rule in the organisation that this notebook must always be correctly labelled with the name of the person using it, and the date when they started using it, to the time it was filled up, at which point it is handed over to the library for storage. This, however, rarely happened as reporters kept their notebooks either at home or on their desks at work. One respondent argued that there were cases when such notebooks would be produced in court as evidence, and it was up to the individual reporter to carefully store such documentary evidence for self-defence.

The study found out that the library was the main repository of knowledge at The Post. Apart from knowledge generated from the mass of information that the journalists produced, the library had its way of collecting various materials and books. The librarian explained that whenever the library gets these materials, each one is stamped, accessioned, catalogued, labelled, and then shelved. Details, such as the title of the material, the author’s name, year of publication, would be fed in the electronic database using Win Isis program, so that anyone can easily locate any material they need using a keyword search.

In addition, The Post’s library has other electronic reference databases alongside the Win Isis database, and these include the electronic laws of Zambia, electronic human rights library (with access to all UK law reports), Encarta reference, and the Encyclopaedia Britannica reference book, which journalists sometimes use for getting background information for stories. The librarian proudly proclaimed that all the information stored in the library is easily accessible to library users. He added that in order to maintain order, no-one in the organisation is allowed to use library com-

puters without a supervisor, or to re-shelf library materials.

## 6.4 Asset Management

An asset would generally refer to something that could be convertible into cash. In this regard, the study sought to find out which of the information, knowledge, or data collected by The Post was an asset that had potential monetary value, and how this was realised (if at all). The study established that The Post only considers as an asset the print edition of the newspaper that has a cover price of K3000 (US\$0.35). With a circulation of more than 20 000 copies, the is available to wide section of the Zambian population through well-established distribution channels. The librarian revealed, however, that almost all the information stored in The Post library was considered as a potential asset and the organisation would, in the near future, start charging a nominal access fee to members of the public who may want to use the library.

## 7. General discussion

Results of this study have shown that The Post seems to have a solid knowledge and content management system going on. The organisation has up-to-date systems that enhance the way the members of staff collect, modify, generate and codify knowledge in ways that are unique in a typical Zambian newsroom. However, these systems are largely paper-based, and tend to be too manual. At the same time, it can be seen that newspaper tries to take advantage of the promise of ICTs, especially regarding the way these can help the organisation to create and maintain a competitive edge over its rivals in the business. With a systematic workflow process, content, and knowledge management systems already in place, The Post has moved towards a digitised newsroom model, placing it way ahead of other media organisations in the country. As spelt out in its

mission statement, The Post strongly believes that “content is king”. To be successful, the newspaper promises to produce the best content, manage it efficiently, and extend its use effectively.

However, my final analysis is that while the organisation has embraced ICTs as a way of generating and managing its content, the organisation’s CMS and KM strategies’ full potential have not been fully exploited. For example, repurposing content, analysing, and extracting features important for finding and navigating content for the financial benefit of the organisation, are all strategies central to the effective leveraging of a CMS. With The Post, it is only the print version where monetary value is realised. Its rich library archives and online resources are severely under-utilised. The major reason for this could be that the newspaper’s readership has no access to the internet, and other technological devices for receiving news.

The ability for The Post to successfully exploit multi-platform publishing opportunities that become possible with a high-end but cost-free, CMS will be influenced by answers, if any, to questions concerning the introduction, implementation, and benefits of an internal ICT policy, and its impact on how the new system can be appropriately integrated into the existing newsroom workflow system.

## 8. Conclusion

The chapter analysed newsroom process flows of information assets at The Post newspaper in Zambia, with reference to technological, and policy factors. It focused on knowledge management and creation, and addressed stages of knowledge generation, codification, storage, refinement, and distribution. The paper gave a brief background to, and highlighted The Post’s information operations in the wake of new information technologies. The study objectives, methods, procedures and techniques of data collection were discussed. The

findings were presented under four major themes, namely; work flow process, content management, knowledge management, asset management.

## Footnotes

<sup>1</sup> Interview with Mwila Nkonge, journalist (5/09/05).

<sup>2</sup> Interview with Chris Tshani, IT Manager (6/09/05).

<sup>3</sup> Interview with Mwila Nkonge, journalist (5/09/05).

# Chapter 8: The Nation, Malawi by Douglas Hampande

## 1. Introduction

The chapter seeks to discuss issues concerning newsroom process flows in one of Malawi's leading daily newspapers, The Nation, with particular reference to technological and policy issues, and how these impact on knowledge management (KM) in the organisation. In order to achieve this, detailed descriptions of the newspaper's news production system, including its day-to-day operations in the newsroom, the advertising department, and the library are provided. This is done with a view to providing recommendations on how the organisation can improve on its workflow system, and its content and knowledge management practices.

## 2. Background

The Nation newspaper is an independently-owned weekly publication, which was started in 1993. It is owned by Nation Publications Limited. Based in Malawi's commercial capital, Blantyre, The Nation is one of the leading tabloids in Malawi, with a wide readership base that extends beyond Blantyre into other major cities in the country. It also has two bureaux outside Blantyre, one in the capital Lilongwe and another in Mzuzu. The Nation is the only newspaper in Malawi that is available online. It comes out every Saturday morning.

## 3. Methodology

The study was conducted over a four-day period

at the newspaper's head offices, where the main newsroom is located. Generally, I received a lot of support from the interviewees in management, as well as among ordinary staff. The research methods employed included a combination of semi-structured interviews, observations and documentary analysis.

## 4. Discussion of findings

### 4.1 Technology use and adaptation at The Nation

Judging from the observations, there is a relatively low level use of new information communication technologies (ICTs) in gathering, processing and storing information and knowledge at The Nation. My interviews with selected staff members also seemed to support this view, as there was a general lack of appreciation, especially by management, of the ability of ICTs to improve the productivity and efficiency of the organisation's production routines and workflow system. For example, the newspaper's editor-in-chief, revealed to me that he rarely uses the internet and does not use email at all. This, however, was not limited to the editor-in-chief alone. Several other interviews I conducted revealed the same trends, with most interviewees confessing that they did not use the internet or any ICT-related tools, except the fixed telephone and fax systems that are available in the newsroom. Some, however, said that this is mainly

because there is no clear organisational policy on how new ICTs should be incorporated into the organisation's production processes and, as a result, members of staff remained largely ignorant of the benefits of hi-tech news production systems. This was also exacerbated by the fact that the newspaper operates on a tight budget, a fact that means there is no room for the acquisition of what is generally seen as 'luxuries'.

The Nation newsroom only has ten personal computers (PCs), which are shared by the news, features, business, and sports desks. The shortage of PCs in the newsroom clearly affects productivity in newsroom, as reporters often have to jostle for a workstation in order to type a story. As a result, the editor-in-chief 'donated' his computer for use by journalists in the newsroom:

*There is no computer in my office because I felt that I can't have one when others in the newsroom have none. We have three people queuing up for one computer at times but we are aiming at a ratio of three people using two computers. We do not have a policy per se on this issue of incorporating ICTs in the newsroom, but I must say this is something we are responding to right now. We have PCs because they are tools as a news organisation that we just cannot survive without.*

However, none of these computers are connected to the internet, except for the sub-editors' computers, all four of which are connected to the internet via a dial-up system. According to the editor-in-chief, this is mainly due to the expense involved:

*It is very expensive here [in Malawi] to get connected to the internet... this is a factor that we have to take into account... in addition, with the high bills we get from the [Internet Service] Providers, we have to strictly control access to the internet. Some people spend the whole day looking for small bits of information so at present, we are*

*coming up with a policy on the use of email so that it [limited access] does not work against our objectives as a media organisation.*

As a result, for reporters to research background information for their stories on the web, they have to wait until the sub-editors' PCs are free. When this is not practical, some stories are published without much research. The newsroom is, however, has an internal network system (LAN), which forms the backbone of the workflow system.

## 4.2 Description of stages of copy flow

### 4.2.1 Head office

After reporters have written their stories, they queue them on the line editor's folders (via the LAN), who in turn send them to the sub-editors after making the necessary correction on them. After the stories have been subbed, they are then sent to the editor-in-chief. After the editor-in-chief has gone through all the stories and is satisfied with them, he passes them on to the production department. The LAN also contains some materials used for production, including the pictures, adverts, reader letters and the stories themselves. The Nation has been using this system since 1997.

The process of converting the vast amount of data that reporters at The Nation come across on a daily basis into information (and eventually knowledge) is informed by many factors. According to my interviews with a few selected journalists, most said that while selecting which bits of raw data to collect in the field for their readers is informed by intuition, the process of converting this data into something valuable for the organisation is informed by their experience and organisational culture. However, from my discussions with them, it was clear that drawing a distinction between data, information and knowledge was problematic.



However, one of the photojournalists I interviewed told me that pictures are chosen within a particular context in which they will be used. Thus, context, for him, was important in making a distinction between data and information.

## 4.2.2 The two bureaux

The Nation's two bureaux in Lilongwe and Mzuzu are situated over 500 and 700 kilometres away from the Blantyre headquarters, respectively. This physical distance means that the workflow system between the two bureaux and headquarters is strained to say the least. Both bureaux have their own pool of reporters that collect news, pictures and in some cases, advertisements. These are invariably sent to the head office by fax, from which the newsroom types converts to soft copy before they are forwarded to the sub-editors and the production department. Lack of expertise on how to send pictures via email as well as unavailability of internet means that both the Lilongwe and Mzuzu bureaux send their pictures via fax. This becomes complicated when the bureaux have to send analogue pictures. In such instances, the pictures are transported physically by road to Blantyre, and they can take up to over six hours to arrive in their destination. I was informed that both bureaux have digital cameras, but these are rarely used since there is no one there knows how to use them.

However, according to The Nation's production manager, the introduction of digital cameras has helped the organisation reduce costs associated with analogue photography. This is especially the case with the head offices in Blantyre. He revealed that since the organisation does not have its own photo processing equipment, they usually outsource the development of their photos to commercial studios and this, doubtless, impacted negatively on the organisation's finances. He also said digital cameras are more beneficial because they have features such as cropping and red-eye

reduction, which enables the organisation to improve the quality of the pictures:

*The advent of digital cameras has enhanced our production speed. Digital cameras skip the old process of cutting and scanning the film; one can now just take a picture, download it, and edit it on a PC, and give it to the people in the newsroom to put it on the pages. The only setback is that we have to spend a lot of time editing to get the quality of the picture we want.*

## 4.3 Telephones

Nation Publications Limited has an unwritten policy to provide mobile phones for senior newsroom personnel from the position of deputy editor upwards. The organisation also has a fixed monthly airtime allowance for them to use in carrying out their day-to-day duties. However, the editor-in-chief admitted that although it is senior editorial staff that are given these benefits, "the ideal people are the reporters since they are the ones who are always in the field collecting information". Nonetheless, he argued, the reporters have full access to a fixed phone service which is available in the newsroom which they can use to make their phone calls. Once again, he said, financial constraints mean that the mobile phone facility cannot be extended to everyone in the newsroom. The fixed phone in the newsroom has a strict monitoring system which requires that one enters a unique password to use it, after which, it records the number(s) dialled, including the length of the call(s). Some reporters revealed that they have since resorted to buying their own mobile phones, a move which they argued benefited the organisation since it means they use their own resources to conduct official company work.

## 4.4 Knowledge and asset management at The Nation

The Nation seems to rely mainly on manual systems for managing its informational assets. For example, reporters' notebooks, pictures (both used and unused) and old newspapers are stored manually in the library. According to the librarian, stories and pictures are stored as cuttings which are put in envelopes and labelled by subject and are shelved in alphabetical. This means that one can spend several hours searching for a particular story or picture, unless one knows the date and specific subject code under which the particular story was filed. However, the introduction of one computer in the library early last year seems to have improved things. With the computer, all The Nation's informational assets are stored on the hard drive. In addition, there is now a back up system, where all data is copied onto Compact Discs (CDs), which are also shelved in the library. There is, however, no electronic search engine in the new system which means searching for stories is still manual and time-consuming. In addition, the system has not yet been extended to manage all the organisation's informational assets, thus, all the material before January 2005 (the date on which it was introduced) is still kept as hard copy.

These problems are not limited to the news section only. The advertising section also uses manual ways of processing and storing some of its information. According to the sales manager, all advert-related information (including advert size and other specifications) comes in through the front office in paper form. Once received, the information is entered into the cash sales book in triplicate. This is then taken to the cashier for receipting, after which one receipt is given to the client, the second to the accounts department, while the third remains in the cash book. Then information is then put in a box and forwarded to the production studio to start making the adverts.

Once the production is done, the papers are returned to advertising, where they are taken to a warehouse for storage. The sales manager said the information is kept in the warehouse for up to six months to allow for internal auditing, after which it is discarded to create space. None of the information from advertising – except supplements already published and in hard copy format – is stored in the library. The advertising section however uses computers for storing the portfolios of their clients, so as to keep track of client's advertising habits. This helps the organisation to offer discounts to valued clients, as well as to know which business sector to concentrate on when pursuing adverts. The classifieds, however, do not have any computerised client records.

The only section that seems to store its content electronically is the production section. The Nation's Design Studio, as it is officially called within the company, is the hub of all production-related tasks from the newsroom and from the advertising section. Using the internal network system, the Design Studio is able to monitor the number of stories in relation to adverts in any given week so that it prepares page dummies before other departments are done. For example, Studio staff have a system that can drag a story from the newsroom while the sub-editor is still working on it so as to start planning certain pages. This system saves time as the space available for news is ascertained while the story is still in the hands of the sub-editors, who just have to indicate each story's page number before it is then laid out. The Studio uses ECRM Raster Image Processor software for sending completed pages to an image setter, which automatically produces films in A3 format for the newspaper.

All the design work done in the Studio is stored on a large capacity server, while some of it is kept as back-up on CDs and flash sticks. The Studio has also enabled the company to diversify and

generate extra revenue, as it also offers design services to other organisations and the general public. These services include banners, brochures, calendars, newsletters, press adverts and posters. During the time of the research, my scheduled meeting with the studio manager and one advertising executive was delayed because they both had to rush to The National Bank of Malawi for a briefing to brainstorm on an advert concept the Bank wanted the Studio to design. Because of its potential, the facility receives a lot of attention during management meetings and plans are currently underway to make it an independent division of the company.

#### 4.5 The website

As noted earlier, The Nation is the only newspaper in Malawi that has a website. It was introduced in 1999. According to the newspaper's online editor, the website is "very basic" but meetings have been held to employ qualified full-time staff to update it and to source for adverts. As other ways of generating extra revenue, the organisation is also said to be planning to repackage the website to make it look attractive to readers and advertisers. It was revealed that currently, it is poorly designed and infrequently updated. Readers can access the website free of charge, although the online editor also told me that plans are also being discussed to start a subscription service once the site has been re-packaged.

### 5. Recommendations

From the above discussion, one can argue that The Nation's knowledge and content management systems are haphazard at the very least. In addition, the organisation does not have any written policies for guiding the way members of staff carry out their daily routines in the organisation. Apparently, the only written document is the company's Code of Conduct, which is also only found

in hard copy format in the library. Employees are only advised to acquaint themselves with it upon induction, but there is no follow-up or monitoring mechanism on this.

Furthermore, while most newsrooms have a style guide for their in-house style, The Nation has never had such a document since its inception in 1993. Coupled with the fact that there is no formal induction process, new reporters learn about the "dos" and "don'ts" of the organisation through their peers in the field, a situation which, although good for passing on hands-on, practical experience, may lead to uncoordinated instructions leading to varying standards of output. This can have adverse effects on the newspaper's competitiveness in the market.

This general lack of policy in newsroom procedures and routines also entails that there will be no clear procedures on how to manage the knowledge that the organisation produces. This means that the company will not be able to maintain its visibility and competitive advantage in the market (Awad and Hassan, 2004). It is my belief that clearly written and implemented policies on such issues as knowledge management and ICT usage within the newsroom to gather and disseminate information can enable an organisation to operate effectively and efficiently in order to achieve both its economic and information provision objectives.

The Nation seems to be run on the 'old school' model, where issues like modern ICT integration into the newsroom workflow processes are not viewed as all that important. Lack of coordination at this level also means that the organisation wastes a lot of resources, including time, money and labour through the duplication of roles. However, it is also important to note the economic environment under which The Nation operates. The newspaper is a small publication in an economically small country which means that deci-

sions on the procurement of some of the ‘basic’ tools of modern digital newsrooms are informed by the financial priorities of the organisation. Thus, the editor-in-chief argued that “it is very difficult in Africa to get a story using these things (emails, mobile phones, computers, etc), and to get back the money you invested”. That said, however, policy still remains an important vehicle to guide the way the media organisation will incorporate new knowledge and content management systems should its finances one day allow for it.

## 6. Conclusion

The chapter sought to analyse newsroom process flows in one of Malawi’s leading daily newspapers, The Nation, with particular reference to technological and policy issues, and how these impact on knowledge management at the organisation. It provided brief descriptions of the newspaper’s news production system, including its day-to-day operations in its different departments, which included the newsroom, the advertising section, and the library. It was noted throughout that The Nation newspaper’s newsroom suffers from a serious shortage of policies that guide its knowledge management systems. In addition, this is exacerbated by the lack of belief into the efficacy of modern ICTs in improving the productivity of the newspaper. It was recommended that the organisation needs to create policies for the integration of ICTs in the newsroom and also for the improvement of its current workflow system and knowledge management practices, which are still largely paper-based and manual.

# Chapter 9: Grocott's Mail, South Africa by Brian Garman

## 1. Introduction

The chapter analyses the production, knowledge and content management system of Grocott's Mail, a small community newspaper based in Grahamstown, in South Africa's Eastern Cape Province. Grocott's Mail's unique dual nature – as a community publication and as a training base for students in the town's journalism school – means that the newspaper is laden with many knowledge and content management challenges, not the least being that it is largely staffed with an unqualified and highly transient student reporting staff. The study outlines the workflow processes of the newspaper from the editorial, advertising, and photographic departments, and also analyses its website. The Grocott's Mail workflow processes are laden with many bottlenecks, including an amorphous un-coordinated folder system, which is impossible to navigate and often leads to a duplication of roles. The chapter, therefore, recommends the introduction of a content management system (CMS) at the newspaper, which will integrate all stages of the production process, including archiving of material. The chapter also recommends the overhaul of the newspaper's website and its replacement with one which is automatically updated by the proposed new CMS, until such a time the organisation has enough resources to have a separate, full-time online edition staff and/or can integrate its student staff into this section.

## 2. Background to the study

Grocott's Mail is a bi-weekly, English language, community newspaper. The newspaper is part of a larger company, which also consists of a printing and publishing company and an advertising agency. Until recently, the company was privately-owned, but was purchased by the Rhodes University's School of Journalism and Media Studies in 2003. Since the purchase, the finances of the newspaper have improved considerably, but Grocott's Mail is still not a profit-generating enterprise and continues to rely on subsidies generated from the printing and publishing company and the advertising agency. It is estimated that while the sales of the newspaper are only in the region of 2 500 copies (street sales and subscriptions) per issue, the readership averages up to six times that. While the newspaper's traditional readership comprises mainly of middle-class professionals and university students, many point to the need for it to satisfy all sections of the Grahamstown population<sup>1</sup>.

Grocott's Mail's major competitors include Grahamstown this week (formerly Shoppa) and Talk of the Town, both primarily advertising tabloid publications, and several other regional and national dailies and weeklies which are often seen as fast gaining ground on Grocott's traditional advertising market. In addition to being a community newspaper, Grocott's also provides a practical training base for students in the University's journalism school. One of the reasons for the purchase of

the newspaper by the University was, *inter alia*, to teach journalism students (photographers, designers, writers and new media students) the principles of “excellent newspaper practices, involve them in creative projects which push the boundaries of journalism, experiment with forms of journalism that are appropriate to both South African and local conditions...” (Garman et al, 2003). This means that much of the newspaper’s reporting staff are transient and are still in training, typically they lack the skills and confidence to be pro-active in their approach to their work and to problem-solving. Thus, Grocott’s Mail lacks what Castells (1999) refers to as “self-programmable labour” (those who, through education and experience, have acquired the ability and confidence to re-define and develop the necessary skills for their jobs, and to access the sources for learning these skills) in critical areas of production.

### 3. Objectives of the study

The objectives of this study include the assessment of current content, knowledge and asset management practices within Grocott’s Mail. This will fall into four main areas – newspaper production; management of knowledge resources; assessment of staff and student performance; and the Grocott’s Mail website. In the short to medium term, this information will be used to generate enough knowledge of the newspaper’s current activities so that an appropriate content management system (CMS) can be introduced to help make production processes more efficient and to enable Grocott’s Mail to move from a reliance on its single legacy platform to producing and publishing news in print and on a website.

Because of the dual nature of the newspaper, the study investigates several issues associated with both the production of the newspaper and the assessment of student contributions to the paper. With regard to newspaper production, the

edition planning, current workflow management systems (both in the editorial and advertising departments), and human, technology and content management are investigated. With regard to the management of knowledge resources, the project explores issues about source contact details, insider information about sources, background research, held and ‘spiked’ (discarded) stories, and style and editorial guides. With regard to the management and assessment of students, the study looks at performance appraisal and general human resource management in the newspaper. Finally, with regard to the website, the study discusses the current state of the newspaper’s website, including the way in which it is managed and updated. It also assesses the newspaper’s readiness for multi-platform publishing in terms of attitudes towards such changes, and availability of technology and skills.

### 4. Significance of the study

It was anticipated that the output of this investigation would enable the production of the following which will assist in the planning and production of a CMS. This will, in turn, help in more efficient workflow management and content and knowledge management (KM) at Grocott’s Mail:

- production of flow charts of various workflow processes in the newsroom;
- production of flow charts of relationships between editorial, photographic, advertising and feature workflows;
- a summary and assessment of the current technology employed in the newspaper and the technological literacy of the Grocott’s Mail staff.

### 5. Methodology

The primary tool for collecting data was unstructured interviews with key members of staff at Grocott’s Mail, and also those who worked on Cue<sup>2</sup>. At

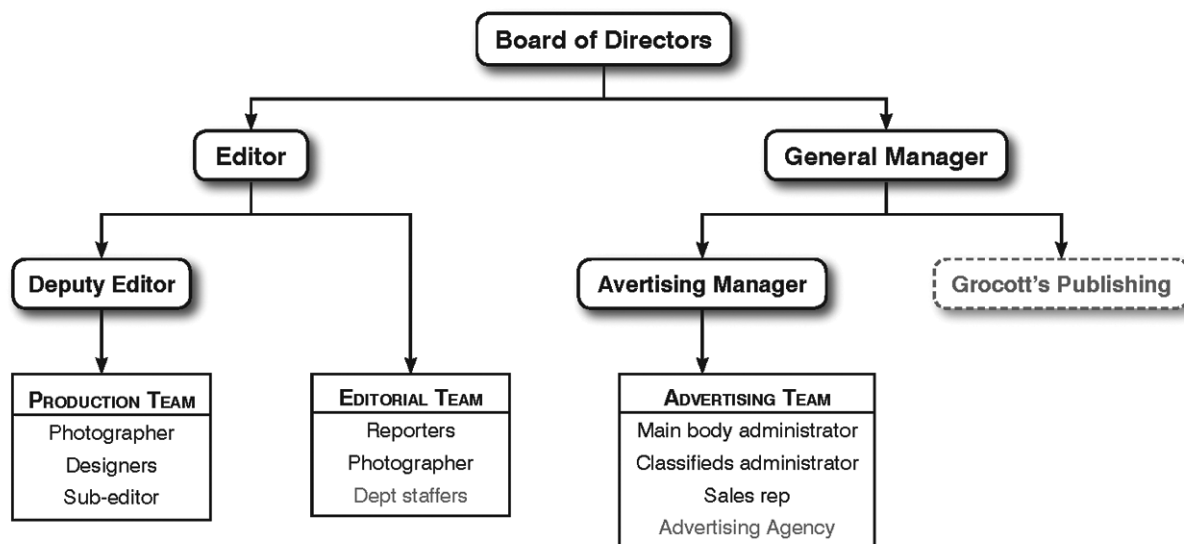
Grocott's Mail, I interviewed the editor, the deputy editor, the chief photographer, the advertising manager and the general manager, while from Cue I only interviewed the advertising manager. The purpose of the interviews was to determine the flow of content during the production process and to determine where bottlenecks, wastage, redundancies and missed opportunities existed. Respondents' views and attitudes on the idea of introducing a CMS, intranet and a new website for

the newspaper were also probed. Additional material was also drawn from some document analysis.

## 6. Discussion of findings

### 6.1 Structure of Grocott's Mail

Grocott's Mail is headed by a Board of Directors, to whom the general manager and editor are responsible [see Figure 5 below]:



*Fig. 5 (Structure of Grocott's Mail newspaper)*

The editorial team, which consists of reporters and a photographer, is led by the editor and deputy editor. [The photographer is part of this team and is answerable to the editor in the context of photo assignments, but is also responsible to the deputy editor as the head of the production team when it comes to photo choice and photo-editing]. This team is occasionally joined by various lecturers from the journalism school in a mentoring capacity. There are two permanent reporters in the editorial team,

but the total number of student reporters varies according to rhythms of the university timetable. The advertising team consists of two administration assistants and a sales representative. The team is responsible for advert procurement, design and placement. The advertising manager produces the advertisement grids from which the third team – the production team – work. The production team is the place where the advertising and editorial teams meet. It consists of a group of lay out staff,

the photographer and a part-time sub editor and it is responsible for the design of adverts, the finalisation of stories and page design. This team takes the editorial copy, photographs, and adverts and compiles all the pages for the presses. While the advertising manager is ultimately responsible for the adverts, the reality is that a lot of the advert design is completed during the night shifts and so the deputy editor tends to also be responsible for checking the adverts on the pages.

Larger newspapers usually have an editor, deputy editor, a news editor, a photo editor and a chief sub-editor (who often plays the role of copy taster). In Grocott's Mail all these roles are performed by the editor and deputy editor although there does not seem to be a distinct allocation of these jobs between the two of them. In addition, both often act as subeditors and mentors for the young and inexperienced editorial team.

## 6.2 Technology

All the computer systems at Grocott's Mail have recently been upgraded and are personal computers (PCs) running on Microsoft Windows XP Pro. All of them are networked, linked to various printers (A4 and A3), and are equipped with the open source Open Office software (OSS), which includes a spreadsheet and a word processing program. The design PCs are installed with Adobe's Creative Suite software which includes Photoshop, InDesign, Illustrator, GoLive and Acrobat. Some of them also have CorelDraw, Adobe PageMaker and Windows Office software.

The heart of the Grocott's Mail system is a Windows server on which is stored all the current working documents (copy for editorial, photographs, adverts, etc), as well as archived material. Material is stored in a variety of folders in the server, but this folder system seems incoherent. Although in my original project design I had

intended to produce a scheme which described the folder structure (and hence the workflow path used by Grocott's Mail), this turned out to be harder than I had anticipated. As well as there being a plethora of seemingly unstructured and unrelated folder on the server, a lot of material is saved in various local drives and the structure and naming conventions of these varies depending on whose PC these are created.

While there is access to the internet, its usage seems to be limited to supplementary research for stories like, for example, for assessing the impact of some national or provincial event(s) on the locals. Occasionally, email is used to make appointments and as an interviewing tool. However, most of the interviewing is done either in person or over the phone – predominantly the land-line available in the newsroom. Mobile phones tend to be used only by the senior staff. Other telecommunications technologies like short message services (SMS) are seldom used as it is an expense that is not covered by Grocott's Mail. There is no intranet at Grocott's Mail and so there is limited use of potential network technologies for internal communication, such as automated reminders and instant messaging, etc.

### 6.2.1 Technological competence of Grocott's Mail staff

The reporters tend to be comfortable with functioning within a Windows environment, but most students are also good with the OSS system. Perhaps because of the transient nature of the staff at Grocott's Mail and the labyrinthine folder structure, all the written material is saved in one place which is relatively easy to navigate from the network (although the deputy editor has pointed out that it takes her at least five mouse clicks to get to the stories that she needs to access).

The designers have variable technical competence



– most of which has been learned on the job. They tend to get used to, and are good at performing computerised tasks that are repeated over and over. However, the more arcane functions related to print production often confuse them – probably because none of them is formally trained in print production. But what seems to cause the most delays is their seeming inability to create and work within functional folder hierarchies. It would be unfair not to point out the most of the staff are aware that this is problematic and frustrating, but they do not have the technical knowledge to remedy the situation. Grocott's Mail outsources its IT requirements to a local firm which is relatively competent in the management of servers, but less so in working with individual PCs, and has no competence in the managing of the peculiar requirements of the kind of software that is used in publishing environments. Nevertheless, there is a widespread enthusiasm for the implementation of a CMS that would solve a lot of the newspaper's current file navigation and archiving problems.

### 6.3 Shared resources

There are a number of shared resources at Grocott's Mail but few of them are electronic. There is a general contact book in the newsroom which is available to all reporters, but the updating of the book is sporadic and haphazard. While the contact book is useful, it does not contain much more than phone and/or email details of the contacts. In the process of getting hold of people, reporters learn much more than simply phone details. For example, they know whether a particular person is easier to get hold of on a mobile or land line; if they are more easily available in the morning or afternoon; who in an organisation is best at responding to particular issues; whether there are any issues of protocol that a particular person requires, etc. This kind of information is the sort of 'tacit' knowledge that reporters absorb on the job and seldom pass it on when they leave, but which can save enor-

mous amounts of time and money when pursuing a story. There is also a style guide in the Grocott's Mail newsroom, but once again there is no electronic version of this. The guide was developed by the school of journalism and is updated annually.

### 6.4 Edition Planning

Grocott's Mail has two editions per week – one on Tuesdays and the other on Fridays. Planning for each of these editions is conducted at the first editorial meeting after the last edition. So the planning for the Tuesday edition begins on the previous Friday, while planning for the Friday edition commences on the previous Tuesday. Planning for the weekly entertainment supplement, The Weekend-er is integrated directly into the normal editorial planning and workflows of the newspaper.

Grocott's Mail also uses resources like the event diaries of the local chamber of commerce, Makana Tourism and various Rhodes University departments to ensure that they prepare in advance for significant local events. In these cases, the advance planning and preparedness of the newspaper is dependent on the number of reporters in the newsroom at the time. Because of the unique community/educational nature of the newspaper, much of the editor's time is taken up micro-managing and mentoring students. This severely circumscribes her capacity to do more planning than is currently done, and it thus envisaged that an electronic CMS would go a long way in helping to alleviate this problem.

### 6.5 Workflow processes

There are several distinct workflow processes at Grocott's Mail and each of these will be dealt with in greater detail below. However, it is useful to look at an overall workflow process with all the elements combined as this will give us an idea of how these work together. The work of Möller

(2001) provides an interesting and useful model on which to base the description of the Grocott's Mail workflow, in which she distinguishes between process information sets and material sets. This is very useful as it enables us to identify processes, assess what information goes into each of those processes and what material product comes out of them. Thus, we can recognise where there are useful assets coming out of the normal day-to-day operation of the newspaper, and show areas where valuable resources may be getting discarded. I will add an indication of the participants in each of the processes to Möller's model.

The workflow (Figure 6) follows that of a traditional editorial department. Reporters and senior editorial staff evaluate the strength of possible stories in diary meetings; reporters and photographers are allocated to different assignments; stories are written and edited, and photographs are taken; pages are composed and sent through to the printer for printing, bundling and distribution. Looking more closely at each of the aspects of the workflow enables us to identify processes and sub-processes in more detail. This is important because processes that are unnecessary, duplicated or cumbersome need to be identified so that they can be rectified in the design of a CMS.

### 6.5.1 Editorial workflow

For both editions, the editorial workflow (Figure 7)<sup>3</sup> follows the same general pattern. The flow-chart makes it look fairly simple, but closer examination reveals that it is quite intricate and that there are a variety of complicating factors (which I have labelled 'problem sets') in some of the stages.

The process begins with the daily diary meeting. At this meeting, reporters, photographers and senior editorial staff generate and refine story ideas and angles. Those that are worth pursuing are assigned to reporters and recorded in the news

diary – an Open Office document that is managed by the editor and is updated daily. Once stories are assigned, reporters do the primary research through interviews and phone calls. This is supplemented with research on the web if necessary. Stories are then written (after consultation with the editor if necessary – as part of the mentoring process) and are saved in a central folder. Writers do not have personal space on the server, so unfinished stories are saved in a variety of places such as desktops and various removable storage devices. This often leads to confusion and there have been some instances when incorrect versions of some stories were picked up for lay out.

Once the stories are completed, they are picked up by the editor or deputy editor and editor for sub-editing. The editor revealed that as they are working with student reporters, this sub-editing process can be long and arduous, thus a part-time sub-editor was recently employed to relieve the pressure. Occasionally stories are sent back for rewriting, but this is rare. At this point in the process, things can be complicated by one or several factors. First, the story, once passed for subbing, does not get moved into another folder – it is simply picked up from the same folder by the sub-editor. This means that files accumulate and different versions of stories can appear in the same folder, often leading to confusion. Secondly, there is no coherent, standardised file naming system. In addition, sub-edited stories are saved over the original versions, so if the original is not backed-up somewhere else, version tracking is not possible.

Thirdly, the subbing usually happens in the absence of an accurate page grid, so the sub-editors have little idea of the actual size of stories. Thus, those sub-editing the stories tend not to cut them sufficiently, and so they are usually too long for the space available on the page. This means that the stories have to be subbed directly on the pages.

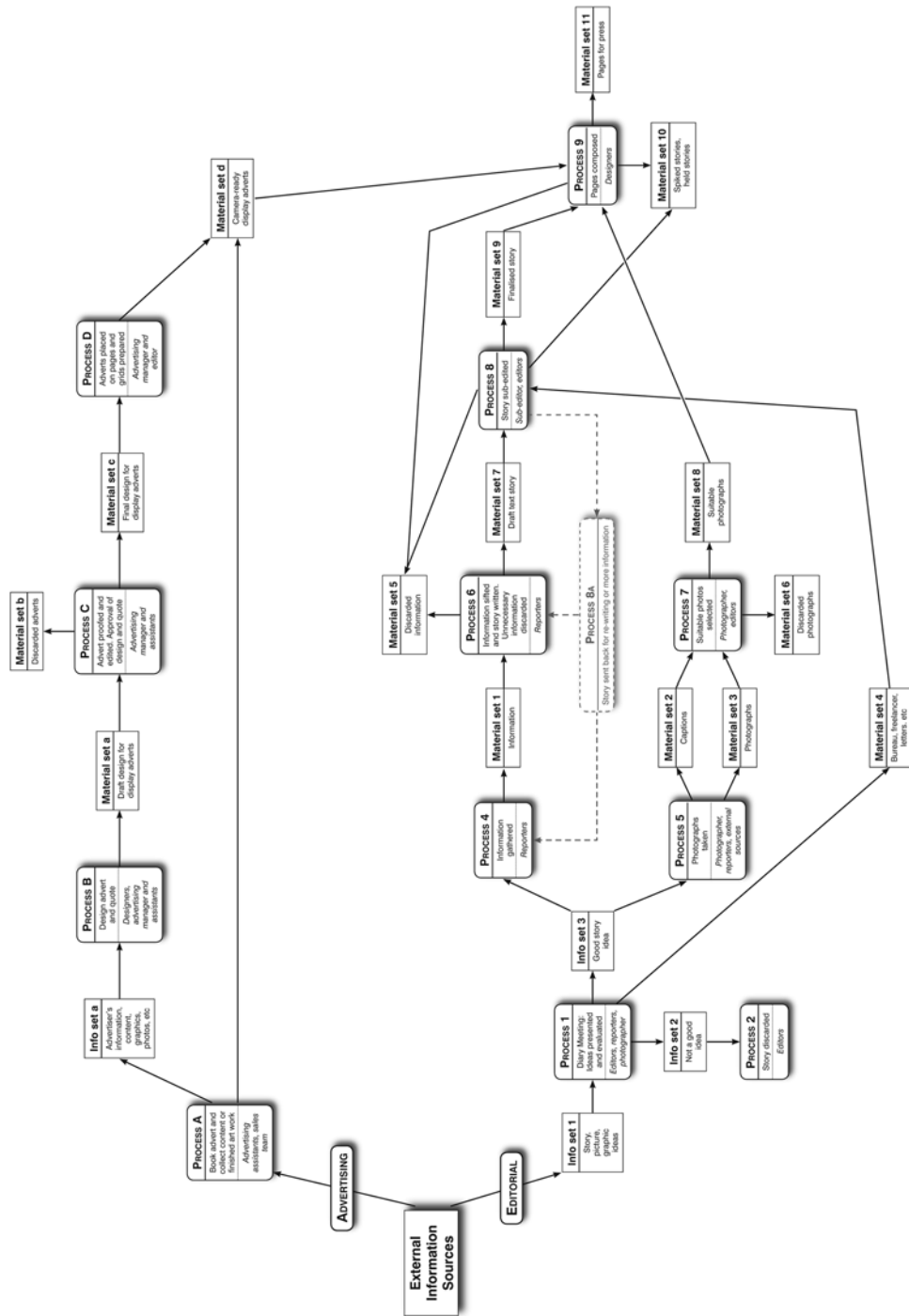


Fig. 6 (General workflow for Grocott's Mail, showing both the editorial and advertising workflows)

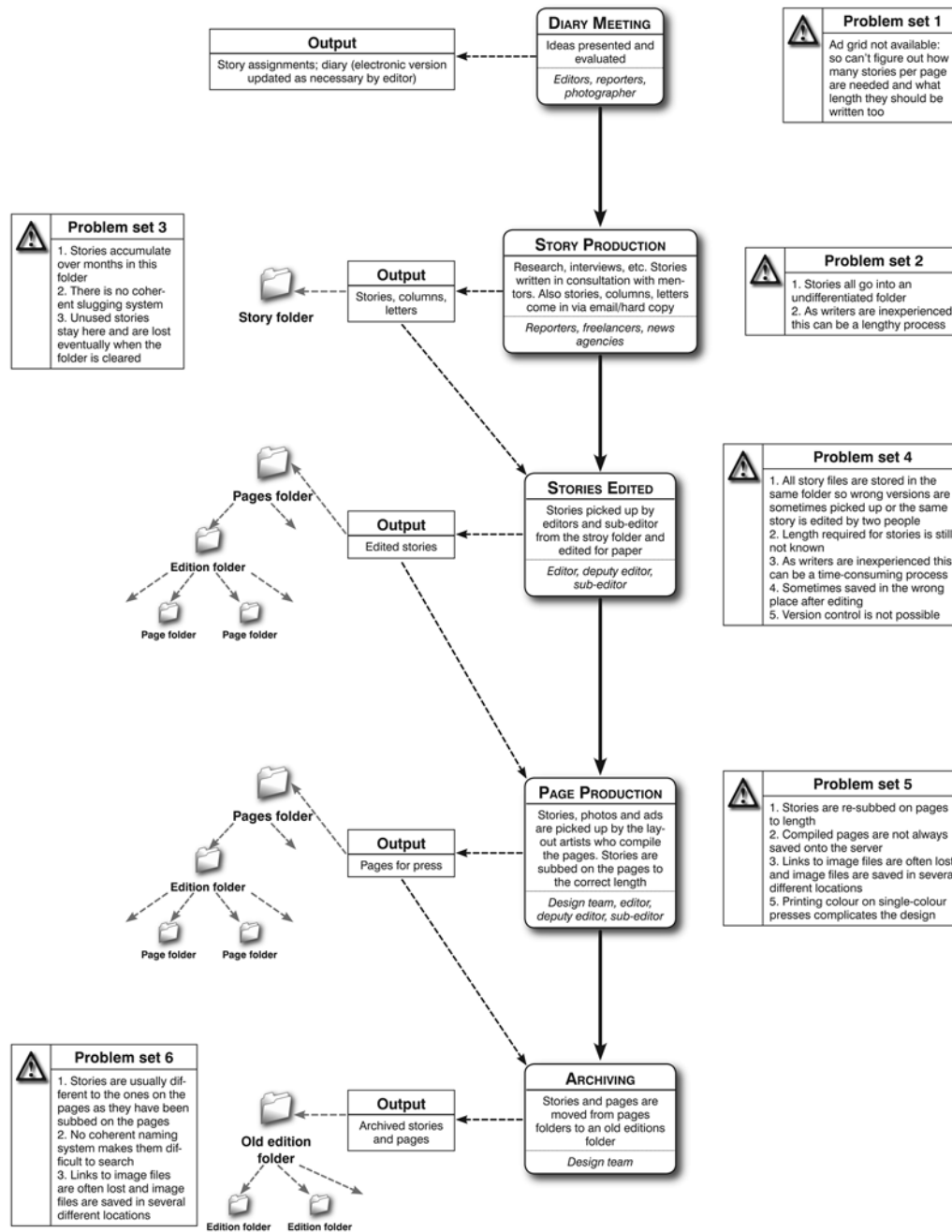


Fig. 7 [Grocott's Mail editorial workflow]

Stories from sources outside of Grocott's Mail [columnists, freelancers, letters to the editor, etc] that arrive in electronic format are also put directly into this central folder. Others that are sent as hard copy are inputted and then saved in this folder as well.. Once all the stories have been subbed, copy tasting (allocation to various pages) is done. Stories are moved or copied into a pages folder (also stored on the central server), which is further divided into edition folders that are, in turn, divided into a series of page folders. The layout artists pick up the stories, photographs and adverts (which are in different folders) and compile them into pages, using page templates that are stored on the central server. With the exception of the colour components on pages, most of the editorial layout and production only happens on the day before the edition hits the streets. Few early pages are prepared because of the absence of an advertising grid. When the pages are complete they are printed, proofed and corrected and then sent down to the presses. Completed pages are saved in edition folders in another folder on the server. Once again, there are several complicating factors.

Firstly, because Grocott's Mail only has single colour presses, all colour work has to be sent down early. This means that the front page colour photograph has to be finalised and placed up to a day-and-a-half before the rest of the page is finalised with the result that the final lay out and story selection is constrained by this (this includes colour adverts). After the stories have been placed, they often need to be cut – sometimes quite extensively – and this leads to considerable delays. Secondly, the recent purchase of an image-setter has meant that pages no longer need to be printed as single pages, but as spreads. The layout artists, however, still work on individual pages that need to be copied onto a spread template and mistakes often occur during the coping. Particular care has to be taken with colour pages as the

mistakes in placement can lead to errors in colour registration. Some of the completed pages are not saved onto the server and are kept on individual PCs so that for the next edition, those pages can simply be opened from the desktop, cleaned up and the new copy put onto that page. This means that the archived sets of pages are sometimes incomplete. Finally, Adobe InDesign does not embed images into the file. It simply creates links between the InDesign file and the image file. When files are saved to a different location, InDesign does not save the linked files with it. So in effect, there are no complete, archived electronic copies of Grocott's Mail at all.

### 6.5.2 Advertising workflow

The advertising workflow is summarised in Figure 8. A detailed analysis shows that the process too is quite complex. The first step in the workflow is for the adverts to be provisionally booked. Once booked, material for the adverts is sent in a variety of forms. These include camera ready copy from advertisers either via email or downloaded from Quick Cut<sup>4</sup>. Often material that comes in pre-designed form uses fonts that may not be in the Grocott's Mail system, or has links to images which are not embedded. This means that material often has to be inputted or changed (in the case of fonts) for the newspaper, including all material that is as hard copy supplied (graphics such as photos, logos, etc).

At times, the designers have to design whole adverts for clients. These are designed on InDesign and are stored in a folder on the main server. This folder is further divided into a series of sub-folders (A – Z) which in turn may be divided into individual client folders. Frequently, adverts are saved without the appropriate fonts and linked images. Adverts that are to be used for the current edition are moved to the page folders for that particular edition. This creates problems as when adverts

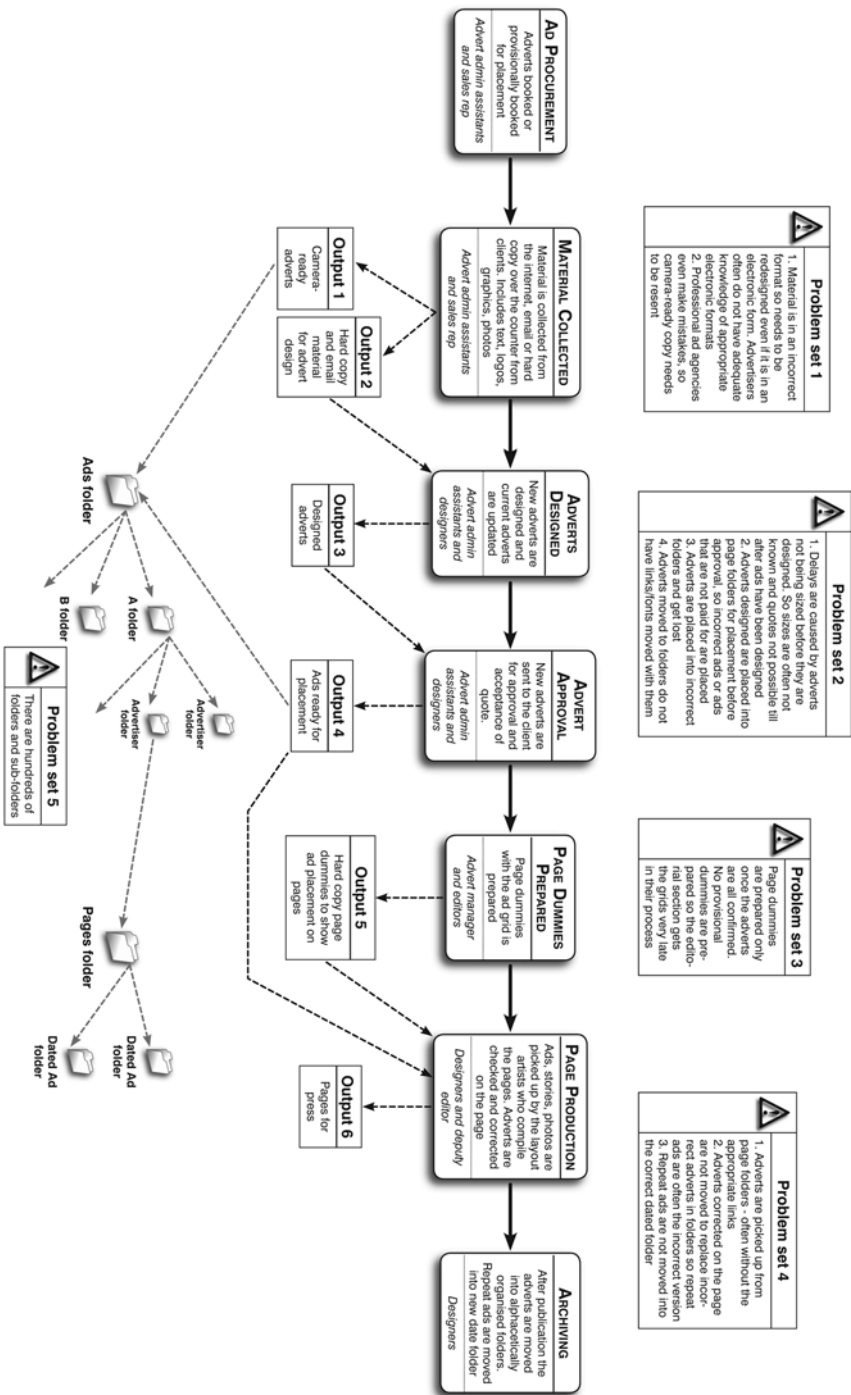


Fig. 8 [Grocott's Mail advertising workflow]

are moved, their linked image files (where available) may not move along with them, or the PC on which the page layout is being done may not have all the fonts used in the advert. After the adverts have been designed, a quotation is prepared and sent to advertisers for approval and proofing. Occasionally, advertisers withdraw at this stage if they find that the advert is too expensive.

After the advert design, page dummies are prepared by the advertising manager in consultation with the editor. So the page dummies for the Tuesday edition are only available late on the previous Friday or on the Monday morning – the same day as the production day. Similarly the dummies for the Friday edition are available on the morning of production day. Apart from the colour adverts, which have to be placed on the pages by the design team and sent down to the presses early, all adverts are placed on the pages at the same time as the editorial and photographic material. Advert proofing is also done on the pages at the same time as the editorial proofing, but by one of the advertising staff. Frequently, as production shifts can go well into the night, advert proofing becomes the responsibility of the deputy editor. Adverts that are corrected on the pages seldom find their way into the folders in which the adverts are stored. The result of this is that if an advert is booked for repeat placements, an incorrect version of the advert is placed on the pages for the subsequent insertions.

### 6.5.3 Photographic workflow

The photographic workflow is summarised in Figure 9. Strictly speaking, this process should be included as part of the editorial workflow, but there are compelling reasons to deal with it as a separate entity. Firstly, most production systems (like QuarkXpress and InDesign) have special requirements for including photographs; secondly, photographs need to be specially prepared for print and so have a distinct editing workflow;

thirdly, photographs need to be archived separately and in such a way that the links between the photographs and the production software are not lost; and finally photography offers another possible revenue stream in Grocott's Mail.

Like the editorial workflow, photographic planning starts at the diary meeting, where story ideas are pitched and assigned. Similarly, the photographer pitches ideas for photographs, or more often, notes the story assignments and liaises with the individual reporters for photographs to be taken. On some occasions, the editor will give the photographer specific assignments. Photographs taken by the Grocott's Mail photographer are done on a digital camera, while some are supplied as hard copy by various freelancers, as well members of the general public. The hard copy pictures are digitised and placed into various folders, which are put in a parent folder on the main server. There are also occasions when photographs are downloaded by the designers from the internet, such as pictures for the TV guide column. These are saved in a different folder from the rest of the pictures.

A range of digitised photos is selected for possible inclusion in the paper and these are given appropriate file names and placed in appropriate folders (e.g. if the photograph is of some 'fun run' at a local school, the photos are placed in a folder labelled with the school's name. This folder will thereafter be used for all the photos that relate to the school). The editor and the deputy editor have the final say on which photo is used. Where appropriate, the photos selected are edited – adjustment of levels, colour, cropping, etc., and converted to greyscale. This is the responsibility of the photographer and is particularly important when greyscale images are to be used on pages with colour adverts because the editorial copy and photos are only printed using the black colour separation. Once the photos are edited, they are moved into an appropriate folder on the server so

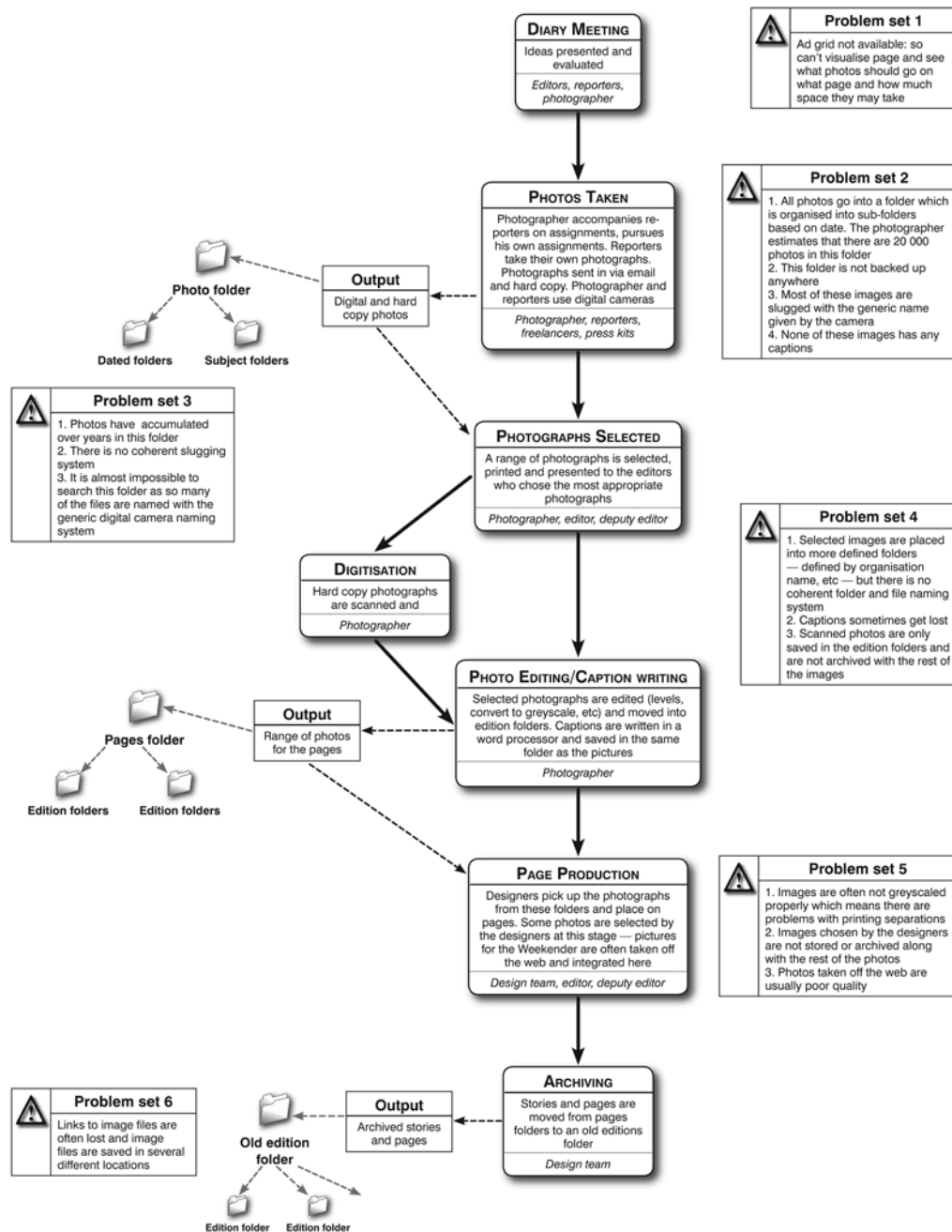


Fig. 9 (Grocott's Mail photographic workflow)



that the designers can pick them up for inclusion on the pages. Greyscale images and their colour, 'parent photos' are stored separately in different folders. Once the pages have been printed and the InDesign files archived, the photos are moved from the 'Tuesday' and 'Friday' edition folders into a variety of old edition folders.

### 6.5.4 Grocott's Mail website

Grocott's Mail has a website, but at the time the research was done, this was not functional. The homepage (see snapshot on Figure 10) consists of a vision and mission statement of the newspaper, and the majority of the links lead to blank or out-of-date pages. The advertising rates, for example, are for December 2004. There was neither any news nor pictures on the site. In addition, no policies had been developed around the site which would address issues such as timing of updates, access (free or subscription), relationship between

advertising in the newspaper and on the site, editorial responsibility, value-added content on the site, and use of the site as a possible third revenue stream (after advertising and copy sales).

Senior management at the newspaper have all expressed concern about the state of the website, but all concede that there is nobody in the newspaper who has the skills or the time to dedicate to improve it. The general manager has had a number of offers from freelancers to update and manage the site, but is concerned about setting up something which is out of the control of the newsroom, and something which turn out to be an expensive venture.

## 7. Recommendations

It appears from the various workflow flow charts that production in Grocott's Mail is beset with difficulties. It should be noted, however, that most



Fig. 10 (Grocott's Mail's Website showing the homepage (left), the news page (top right) and an out-of-date advertising page (bottom right).)

of these difficulties find their roots in four main problem areas. These are:

1. There is an inadequate folder structure for efficient workflow and document saving and retrieval. The plethora of folders on the server and on individual PCs is a nightmare to navigate and is completely incomprehensible to newcomers who then resort to creating their own folders in an effort to cope, thereby exacerbating the situation.
2. The relatively late arrival of the advertising grids means that reporters and sub-editors do not have a good idea of the length of the stories in order to prepare dummies in advance. This results in stories often being subbed twice or even thrice – creating unnecessary duplication and delays.
3. Inadequate archiving of material means that valuable material is lost. There is an extensive collection of photographs that is unsearchable and incomplete archives of stories and pages.
4. There is limited technical capacity in Grocott's Mail to deal with the some of these problems. This is indicated by the fact that the senior staff are aware of problems 1 and 2 above, but are unable to solve them. In addition, they are also aware that the website is moribund and serves no purpose at all in its current state, but they do not have the capacity to remedy the situation.

## 7.1 From Folders to CMS

It is possible to create coherent folder structures within a Windows environment and Grocott's Mail could consider this as a short-term solution to the current dysfunctional folder structure. Accessing different levels in a folder-driven solution is always frustrating, but it is possible to create a variety of short-cuts to appropriate folders which can be accessed through a desktop or through a variety of programmes. It must be emphasised that this is necessarily a short-term solution, because it is not really possible to prevent the proliferation of folders in this kind of system using the tools

and software that are available to Grocott's Mail. InDesign, for example, creates a new folder (and two others inside that) every time one uses its functions for collecting all the links and fonts into one place. When you consider that if you are going to go this route as a solution to the missing links and fonts problem, then you will have one folder per page (as the designers work on one page at a time), 12 to 20 pages per edition and 100 odd editions per year – that is a lot of folders. Thus, it might be best to keep on with the current folder system, up to the time when there a new system is introduced.

A better solution would be to use a CMS with a universal database at the core operating around a Grocott's Mail intranet (Cole, 2000; 2003). This database then becomes a common database from which all output channels draw their content (Möller, 2001), and this is an important first step for Grocott's Mail as they can then move from its single legacy print platform into multi-channel publishing – even if that only means print and web versions of the local news. Such a database essentially is a huge digital dump, which holds any content, no matter what format (see Figure 11). The difference between the proposed CMS and Grocott's Mail's current folder-driven system, is that the CMS provides a user-friendly interface between the user and the database.

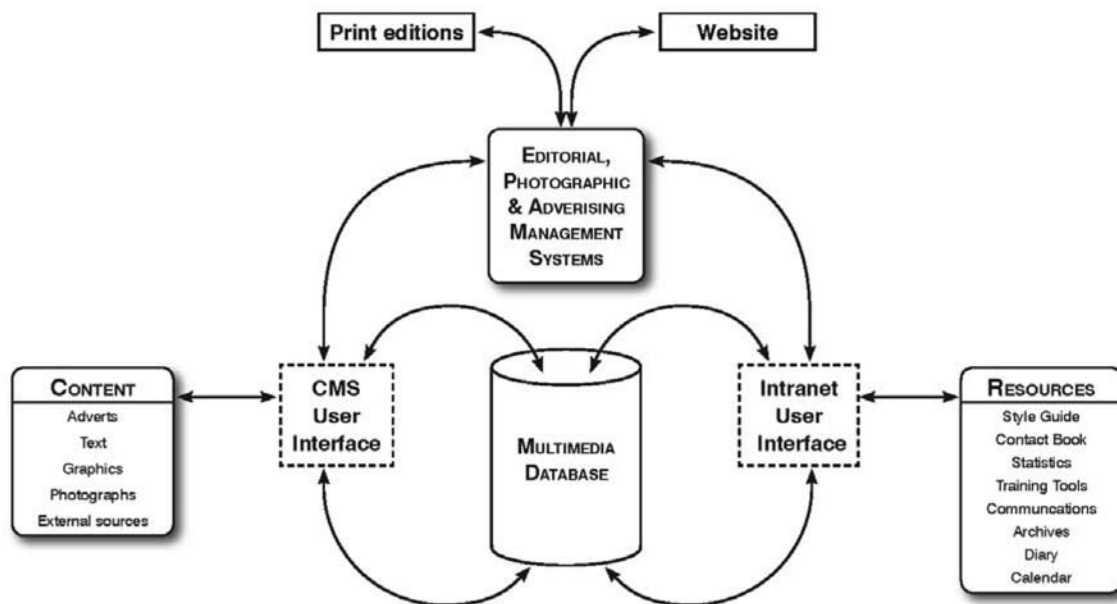
Generally, this CMS has many attractive features. First, it allows for the automated forward and backward movement of content. Stories start in personal queues and then are moved into a news editor's cue where they are checked for length. From here, they can easily be sent back to the reporter if they still need improvement or simply moved on to one of several queues – a 'spiked', held, to-be-subbed queue. From here, they are picked up by the sub-editor who edits them and then moves them into a pages queue and from there, the copy-tasting can be done and the

stories can be moved into various page queues for the designers to pick them up. This does not require that anybody to physically move a story, as would be the case with a folder-driven system. In this way, content and more importantly the knowledge that is derived through the production of that content is preserved.

Secondly, the system can be replicated for advertising and for photographic departments, although these would have to be modified slightly. With photographs for example, I would recommend a preliminary selection process through which photographs which are inadequate in terms of quality are discarded completely before being put into the CMS. Thereafter, they are renamed (this can be done in a batch processing system incorporated

into Photoshop's CS and CS2 versions) and then put into the system. Advertising would have to have its own system, where adverts that are still be approved by the client are held and only moved on after approval.

Thirdly, content can easily seem to 'disappear' from queues after it has been dealt with – giving the appearance of having moved on. In this way, queues do not get cluttered with residual content from previous editions and it is simple to track the progress of stories and other content. In reality, the stories from each level are still saved within the database, and can be accessed if necessary for checking facts or for student assessment needs. In addition, access control and security can be set up so that only certain people have access



*Fig. 11 [A proposed model for a Grocott's Mail database-driven CMS. The database which holds any content, no matter what format for the editorial, advertising and photographic components of the newspaper and a possible website, is the heart of the system. The Intranet also feeds into, and from the database and can be accessed through an Intranet user interface or the CMS user interface.]*

to certain levels of the system.

Fourthly, a CMS of this kind can be used to monitor staff performance. Care must be taken with this though as unwise use of this facility can be dangerous. For example, it is possible in a CMS to assign stories to individual staff members, as well as set deadlines for the stories. If stories are not in by deadline, the CMS can notify the news editor or editor. It can also monitor the numbers of stories that each reporter turns in, how many times they were over deadline, etc. What it cannot do is distinguish between types of stories (an investigative reporter is likely to turn in far less stories than a reporter on a crime beat) or figure out that the reason a reporter is constantly late with his/her stories is that he/she is on a municipal beat and the municipal officials do not return calls on time, or skip appointments regularly, etc.

Finally, depending on how the CMS is set up (if it is a web-based system) it can be accessed from anywhere that has internet access. Once again, this is a huge advantage as users can remotely input stories, which means that it is easier for Grocott's Mail to accommodate the awkward timetables of the students. More importantly, it also means that stories can be filed from the field. As VanBeekum (in Cole, 2000) from the Miami Herald says, "...the longer you stay in the field, the fresher the news will be". It also means that freelancers and column writers can input directly into the system.

## 7.2 Advertising

The current advertising system was one of the areas that was identified by the deputy editor as one of the bottlenecks. As mentioned previously, the fact that the page dummies are only produced on the afternoon before the production day, or on the morning of the production day itself, means that the editorial staff are making, at best, educated guesses at the number of stories per page and

the length that the stories should be. Granted that after a while, one gets used to the approximate number of stories and the kinds of story lengths that are required to fill pages, the absence of a grid still means that it is not possible to get a sense of what the page 'looks like'. Also, most of the stories need to be shortened considerably once they get onto the pages and the design team are not capable of doing this.

Discussions with Minoshni Pillay – advertising manager for South African National Arts Festival student-run newspaper, Cue – revealed some interesting techniques in both advert sales and layout which enabled her to produce an adverts grid for each of the daily diary meetings. Much of this can be adopted at Grocott's Mail. With the exception of the large display adverts, all the adverts at Cue were more-or-less restricted to preset sizes. The sizes were selected on the basis of the most common advert sizes bought over the last few years. What this also meant was that once an advert had been bought, its place was immediately 'booked' on a page even before the advert itself was designed. Also based on experience, provisional advert grids were prepared well in advance. These were relatively conservative as it was seen as easier (although perhaps more heart-breaking) to 'spike' stories when there were more adverts than expected than to suddenly have to produce stories out of thin air.

Having provisional grids early on in the production process means that the editorial team is able to put together early pages which contain softer news and so can be 'put to bed' early. This means that pages can go to the presses in a fairly regular stream and so presses do not sit idle for much of the day and then have to work overtime at night. Once all that adverts have been laid on a page, that page is saved as a Portable Document Format (PDF) file which embeds all the images and most of the fonts and these files are then placed

onto the pages which the layout team works with.

### 7.3 Intranet

The development, installation and implementation of an intranet at the same time as the installation of a CMS is vital. It is the intranet that converts a CMS from a glorified workflow system into a good knowledge management system. An intranet can contain and make available the following shared resources:

- The diary, which can be made visible to everyone and changes can be watched and monitored by all staff. In addition to helping make staff more part of the process right through, it is invaluable as a teaching tool, as it helps students to see how a newspaper develops through its production process;
- A pop-up calendar can be integrated into an intranet. This means that all important dates can be inputted, updated and made visible to all. The Grocott's Mail photographer told me that he frequently puts "Dates to remember" into the newspaper and then completely forgets them himself. A pop-up calendar would help prevent this.
- Important resources can be made available to all staff (editorial and advertising) either through the CMS or the Intranet user interface, and they can be updated as necessary. This can include an electronic style guide, a contact book, research which is important to a wide variety of people, circulation figures, and other important statistics;
- An intranet can be used as a communication tool. For example, through instant messaging (IM) systems, SMSes, and pop-up messages; and,
- Reporters can make their stories available for comment and input to other member of staff. This may aid in story production and in the mentoring of student reporters. It can also be a space where reporters can input into one another's stories in, for example, instances where one may have some specialised knowledge, which is normally not avail-

able to another writer. In this way, reporters' tacit knowledge is shared with others in the newsroom.

### 7.4 Grocott's Mail Website

My immediate recommendation is for this website is that it be taken down until it is functional. In its current state, it does not supply any relevant information to possible users and as such does more to damage the Grocott's Mail brand than build it. The general manager reports that she gets several calls a week from members of the public demanding to know what is going on with the site. Given the newspaper's financial and technological skills constraints, a lot of issues have to be taken into account, including whether or not having a website for the newspaper is worthwhile at all. And once the website is back up, issues about who will update it should also be addressed. This is obviously where a CMS will have an important role, but one also needs to make decisions about what information will go on the site (will stories be repurposed for the site or will it simply be shovelware), when will it go up, how will it be designed and displayed, etc.

Given these considerations, I recommend that they begin with a website that is designed to work in conjunction with a CMS that updates the site on a regular basis with a minimum of input from the newsroom staff. This, however, is clearly still not the most ideal situation. Although Möller (2001) recommends that web editions be staffed and managed separately from the print versions, this could be unrealistic for Grocott's Mail. Another decision that will have to be made by Grocott's Mail is whether or not to set up an automated website as an interim measure with a view to expanding at a later stage. Such an expansion will require a change from a single-legacy print mindset to a multimedia mindset. Print newsrooms traditionally have an extremely linear workflow. Multimedia production, on the other hand, has a less linear

workflow [Cole, 2003; Brusic, in Cole, 2003].

Other issues to be considered here would include how the Grocott's Mail website can be turned into another revenue stream for the newspaper. Should it be a free or a pay site? If access to the site is free, then would readers not go to the site rather than buy the newspaper? What can be added to the site to make it more than simply an electronic replication of the print edition? With the availability of digital photography, photographers generally take many more photographs than are ever used in print editions. The display of these could be one area in which the website is able to better use the newsroom resources than the paper itself. In addition, it might be possible to sell these photographs. Obviously, the development of a good, attractive and functional website would increase the competitiveness of Grocott's Mail in an increasingly competitive and saturated Grahamstown newspaper market. It gives the advertising section something to offer to advertisers as an added incentive to buying advertising space in the newspaper, and it also raises the possibility of the development of syndicated copy, or even a fully-fledged news agency.

## 8. Conclusion

The chapter presented an analysis of the current workflow processes and content and knowledge management systems at Grocott's Mail. It analysed the production processes in four major areas: editorial, photographic, advertising and the website. It argued that the current labyrinthine folder structure obtaining at the newspaper is inefficient, as it often leads to a duplication of roles and general confusion with regards to copy tracking. It, therefore, recommended the introduction of a CMS which will enable the newspaper to organise its knowledge assets more effectively and efficiently. The proposed CMS will also streamline all departments into one integrated system, often

allowing the different departments to monitor each other's progress and thus allow for more informed edition planning and production. The study also recommended a complete overhaul of the newspaper's current website.

## Footnotes

<sup>1</sup> Interview with Grocott's Mail General Manager, Louise Vale. See also Berger (2003).

<sup>2</sup> Cue is the official newspaper of the South African National Arts Festival produced by staff and students of the School of Journalism and Media Studies.

<sup>3</sup> It should be noted that the actual naming of the folders is not as accurate as represented in the diagrams. For example, the naming of the folders for The Weekender supplement varies from the edition number to the date number, depending on who is responsible for that particular edition.

<sup>4</sup> Quick Cut is a website on which advertisers post ready designed adverts.

# Chapter 10: Looking ahead with Nika by Vincent Maher

## 1. Introduction

In contrast to costly products of large software vendors like Microsoft and Oracle, a global community of developers has been producing software that is available freely to anyone who wants to use it. This software is called Open-Source Software (OSS). There are, however, no competitive products positioned within the scope of newsroom automation. Such a product would be incredibly useful – and cost-effective – within the African market to support the development of small community media. It would reduce costs, enhance viability and increase quality and reach.

Against this background of possibility, the research recorded in this book shows a lack of exploitation of technology in many newsrooms. Workflows from reporters to the sub-editors and layout people are inefficient; the data is not efficiently archived or made searchable, nor is it extensively being fully or easily repurposed. The result is newsrooms that cannot utilise their own knowledge capital (such as an online library archive, including of digital photos), and websites that are erratic and superficial.

A tailored Open Source software suite could help remedy these issues, and also assist extensively with organisational management and asset management (e-commerce).

Within this context, the New Media Lab at Rhodes University's School of Journalism and Media Stud-

ies identified the need to develop the systems that could bring African newspaper enterprises the benefit of the next wave of the digital age. Because it relies on Open Source, the system will lower the threshold of entry into newspaper publishing, to the benefit of entrepreneurs, and boost existing independent publications – including their presence in global cyberspace.

With support of Dutch solidarity group, NiZa, the New Media Lab has thus commenced work in 2006 on a three-year project called “Nika”. Nika is the Nguni word for “to give” – and it symbolises the spirit of the work. The resulting software will be available free to African media houses, who – because of the nature of Open Source – can also draw on an international community of geeks to adapt the systems to suit their needs.

The objective of the project is the creation of a solution for small to medium-sized newspapers that would manage news workflow, web publishing, archiving and knowledge management. This objective of the project has remained consistent since its initial conception several years ago, although ideas have been added in talks at Highway Africa with amongst others the CAMP project in Prague. However, the scope of the project has also shifted significantly based on the knowledge generated by the research for this book and also by three experimental software trials in 2004, 2005 and 2006.

Taking account of all this, the following sections outline Nika's key assumptions about knowledge and content management and the particular needs of a small newspaper. It then describes how these assumptions have been influenced by the research findings and the tests. Finally, it makes some observations about the future of the project.

## 2. The challenge

The case studies recorded in this book show that the deployment of automated content management systems remains a problem-area for many African newsrooms and the concept of knowledge management has little or no momentum at all. The reasons for this are a combination of economic, political and cultural factors tied to aspects of education and management styles. There is also the scarcity of skills and access to the Internet: what we call the "Digital Divide" at an organisational level.

However, from the outset the project was informed by the fact that the vast majority of news organisations had decided to implement some sort of ICT strategy even despite relatively low levels of Internet use in Africa. Most newsroom production and news publishing in Africa has been digitised but the efficacy of the systems is variable and often introduces new weaknesses in the news production process. Among the most common problem areas are workflow management and archiving.

### 2.1 Workflow management

The production processes of a newspaper are perhaps the longest-standing instances of the workflow of the written word. As editorial processes have become formalised and professionalised, the division of labour in a newsroom requires several key aspects of workflow management. These are: the ability to define processes with start and end

points, the ability to control the flow of information through these process and diagnose problems, exception handling, the maintenance of a history of each story's photograph and the association of levels of accountability to each step in the process.

Before digitisation, workflow patterns were defined by standardised operating procedures and facilitated by communication networks that involved the transfer of a physical object (paper) from one point in the system to another. The benefit of this analogue system was that each time a major revision was made to a story a new object was created that could be physically compared to its predecessor. It was possible to track where in the process mistakes – or improvements – were being made. Furthermore, each step of the workflow process could be accompanied by a conversation between the individuals responsible for each step. There is a particular richness and efficiency to this conversation that has not yet been equalled in digital news management systems – but even so, the world has moved on from physical to electronic transmission systems.

During the period following the rapid digitisation of many newsrooms, the analogue workflow processes operated side-by-side with new digital workflow processes. As an example, journalists would use computers to type their stories, but print them and take them to the news editor or sub-editor and receive copy corrections on the physical paper. The journalist would then return to her workstation, make modifications and repeat the process. In many cases this is still the standard operating procedure in smaller newsrooms, and this practice highlights a particularly problematic aspect of digital file management: history management. To this day it remains easier to save a new version of a document over the old one, thereby destroying the historical record of changes, rather than creating a backup of the original first.



Although change-tracking functionality has been incorporated into word processing packages like Microsoft Word, it is seldom used. In addition, the use of stand-alone word processors introduces several limitations into the automation of linear workflow process. Firstly, files have to be moved through workflow processes using folders that are shared on a network. This introduces several problems: the raw data format of the documents is not easily readable by other software applications, especially after change tracking has been turned on. A new administrative need arises for complex folder-based permissions control based on the server operating system and, ultimately, the responsibility of moving the new version of a file into a new folder depends on the voluntary and competent compliance of the individual working on the document. During the investigations at the Grocott's Mail newsroom, discussed earlier in this book, folder-based workflow processes were still in use.

It is my experience that either networked folders or email are currently the most common mechanism for moving stories through a workflow process in small newsrooms in Africa. Even if change tracking is implemented successfully within the document format itself, both email and file-folder structures present two further problems. Firstly, management of the archive becomes difficult because of the inevitable clutter in mailboxes or folders. Secondly, these systems introduce complexity in the process of indexing an archive for search and in many cases, especially with email, the archive becomes bound to a particular computer or user account. Thirdly, and this is a problem that is notoriously difficult to resolve, these systems do not enable the reflection of changes made to stories during the sub-editing and design-time process. A typical scenario is the following: a document moves through the workflow process and arrives with the designers; the designers make adjustments to elements of the story and the final layout

files are then saved for publishing. The changes made during the design phase are not reflected back into the workflow history so that the most up-to-date version of the story available in the folder system is not the one that was finally published. As is the case in many newsrooms, the final version in the folder or mailbox is then the one published on the Web – not the one in the newspaper. This unintended discrepancy has been one of the most persistent challenges in the Nika planning and development process.

On an even higher level, many of the smaller newsrooms cannot afford the costs of software that effectively manage document changes and are therefore forced to choose between using inferior software or using illegal copies of the software they want. On the other end of the spectrum, enterprise newsroom management systems that merge the document management with the workflow process remain well beyond the financial means of smaller newspapers.

## 2.2 Archiving

As I mentioned earlier, the management of a digital archive is particularly problematic in situations where networked folders or email are used to manage the flow of copy through the newsroom workflow process. At present most small newspapers either keep a physical copy of the newspaper and prints or negatives of photographs, or copies of the final layout files on a backup storage system like external hard drives or on CD/DVD.

Many organisations that have maintained extensive physical archives now face the difficulty of retroactively digitising large sheets of paper. This process is costly not only in terms of time but also in terms of hardware and software and, given the rapid rate of change in the computer industry, it remains unclear which is the most enduring format to use for storage. The limited lifespan of

computer disc drives and removable media like CD or DVD require a long-term strategy for upgrading the storage media format to ensure that the data remains readable on current hardware and to protect it from corruption over time.

Beyond the practical matter of storage and data formatting, it is also self-evident that archives are generally useless without an effective indexing system. In digital terms this means that files or data need to be organised and stored in such a way that makes the association of meta-data easy and keyword searching possible. There are, therefore, varying degrees of utility that need to be considered when it comes to choosing data formats. For instance a scanned newspaper page, stored as a binary image, is not particularly useful because the text on the page is not accessible for search indexing. Optical Character Recognition (OCR) systems offer a partial solution to this problem by converting digital images into text. This, however, gives rise to a new problem: how to store the text once it has been extracted. For the purpose of indexing, the simplest solution seems to be to store the text of stories in a relational database and to link the source image files to the relevant database records.

Unfortunately, many small African newspapers will not be in the financial position to digitise their archives before their physical archives are compromised. The general position from which the Nika project treats archiving is that this situation is a given and that the primary objective is to prevent future data losses by ensuring effective archiving for current and future editions of the newspaper. In general, we see the maintenance of good archiving, indexing and retrieval system as vital to the introduction of knowledge management systems in the future.

### 3. New(s) Media Development Strategies: an electronic enterprise

The distinction between data, information and knowledge is a highly contested one amongst academics and industry professionals. A common view of the distinction is that data represents the basic building blocks of information. For example a telephone number or a name may be seen as data. Data becomes information when it is organised and presented in context. A list of names and corresponding telephone numbers in a directory would, in this sense, be information. Information becomes knowledge when it is combined with understanding of what it means or can be used for. The telephone directory becomes knowledge when listings have commentary and contact reports next to them along with descriptions of the contexts in which the people need to be called. In short, “knowledge is organised information together with understanding of what it means” (Wensley and Verwijk-O’Sullivan, 2000). The understanding, in this context, comes primarily from experience and memory (Bukowitz and Williams, 1999). With this definition of knowledge, it is clear that a news organisation relies heavily on data, information and knowledge to produce a news product, and that a news product is, itself, produced by applying knowledge to information. A journalist collates all the facts about a story (data) and applies his or her own context and understanding (knowledge) to produce a news article or video clip (information) that can, in turn, be used by the reader who brings their own experience to bear on the story during the reading process. The word “content” is generally used to describe the information published by a news organisation.

Three important aspects of this conception of data-information-knowledge work become relevant when considering ways to develop a newsroom: firstly, the mechanism for managing the data used by journalists for news production; secondly, the

management of the knowledge journalists bring to bear on the accumulated data in order to produce content; and thirdly, a mechanism for storing and publishing content. Figure 2 illustrates the model proposed in Chapter 3, adopted from the basic model for Enterprise Content Integration (ECI) discussed by Bill Rosenblatt (2003) in the Seybold Report. It emphasises the centrality of knowledge management at the centre in the relationship between core business functionalities like workflow systems and data/content management systems used in the newsroom. In Figure 2, data is stored in databases and other repositories, information is stored as meta-data and knowledge is stored in the rules and logics underpinning the knowledge management tools.

The ECI approach advocates the use of technologies that tie together all existing business software and repositories. This is by software that adapts to each of these, and enables universal access between different and discrete products. This approach enables organisations to retain specialist software already in place rather than attempt to implement systems that do everything, thus enabling businesses to continue to benefit from past technological investment if that hardware and software is still fulfilling its requirements (Rosenblatt, 2003). The ECI model is particularly relevant for African newsrooms because of its emphasis on interoperability, the ability for software products to interact with each other, and its emphasis on metadata (information in the form of data about data) as the core mechanism for establishing relationships between data. African newsrooms, particularly in areas that are poorer or that have smaller markets, generally have less expensive legacy software in place and can therefore plan for the future with minimal loss of past technology investment.

Furthermore, due to the particular language requirements for software in Africa, and the fact

that cost is a major consideration, it is unlikely that large centralised systems will become available that precisely meet the needs of a developing African newsroom. The ECI approach also provides the flexibility to mix and match software solutions for particular needs possibly by initially combining open-source products with commercial ones and then later replacing the commercial ones completely. The only, and sensible, constraint imposed by adopting the ECI approach is that software and data repositories must offer some sort of standardised access protocol for integration into the ECI system as a whole like, for instance, Web Services or eXtensible Markup Language (XML).

The modification of this model to include knowledge management functions at the centre of the system is based on a discussion that will take place later in this paper. As the scope of this paper is limited to the newsroom, I will discuss elements of the ECI model that pertain directly to the editorial functions and only touch lightly on the broader business functions where necessary (although an ECI can – and should – extend across the institution's intelligence as a whole). In the following sections I discuss data management, content management and finally knowledge management.

#### 4. Data management

Journalists are notorious for trying to remember facts by storing them in collections of notepads that become increasingly difficult to access as time passes. This type of data decay is caused by a multitude of factors. As time passes, the linear accumulation of data in notebooks becomes difficult to access because the context in which notes were written and, indeed, the summative knowledge accumulated in them is no longer available except in the memory of the person who wrote them. While this may work for some journalists, it does not enable them to easily share this informa-

tion with other journalists without physically revisiting their notes. Paper notes can also get lost or physically damaged, rendering them useless. As journalists become more technologically inclined, they adopt various means for overcoming the limitations of paper. One such way is to maintain digital copies of notes, or to use computerised contact management systems like Microsoft Outlook. But this is generally not organisation-wide standard operating procedure and the various systems used by individual journalists have limited degrees of interoperability. As such, each journalist becomes an island of data, information and knowledge and the use of technology, unless guided by an overarching strategy, does not significantly help teamwork, collaboration or research.

The most obvious way to overcome these problems is to implement a centralised data management system that all the journalists use. The strategic objectives for any centralised data management system should be to increase the degree to which journalists can share their data and access archived data without complicating their day-to-day tasks. Technically, this could be achieved in a number of ways and the precise technology implementation should ultimately be determined by issues like usability, cost-benefit and the extent to which newsroom managers can convince journalists that the adoption of a uniform data management system would be to their benefit in the long-term. The benefits, however, would be dramatic from an editorial and business perspective. In terms of editorial efficiency, journalists would be able to draw on large pools of data collected by their co-workers, access and archive their own data and enter meta-data that conforms to an enterprise-wide system of classifying or naming, i.e. a “taxonomy”. On a business level, a news organisation would benefit in terms of increased news production efficiencies, increased data security and the ability to maintain levels of redundancy adequate to prevent work interruption and data

loss due to computer malfunction or a catastrophe like a fire on the premises. Most importantly for both business and editorial concerns, staff will contribute to the collective data, information and knowledge stores during their employment that will remain part of the enterprise knowledge base after staff retire or stop working.

## 5. Content Management

Publishing to digital platforms requires a mechanism to access, edit and publish content after it has been produced by journalists. In its simplest form, a CMS would allow a journalist or editor to insert or edit a news story and schedule it for publication. The CMS would, thereafter, control internal and external access to the news story through a web site or multimedia application.

In reality, however, content management is complex. The roles of various workers in the editorial team require different types of work to be done on a news story and content management on its own does not provide sufficient complexity to manage, for instance, the assignment of tasks, the routing of a story from one person to another for editing or the management of security and Digital Rights Management (DRM). For this reason, content management systems sometimes take on a hybrid form including features like version control, workflow management and even web site construction. The position of a CMS in an ECI system, alongside other services like data management and core business functions like accounting and Customer Relationship Management (CRM), requires that a media development strategy take into account the necessity for an interface that allows central access to all of these services and convert their contents from data or information into knowledge.

### 5.1 Knowledge management

To continue the earlier discussion about data,

information and knowledge, Bukowitz and Williams (1999) describe different levels of knowledge ranging from shallow to deep. The first and most shallow type of knowledge is procedural. It is knowledge about how to perform particular tasks. The second type of knowledge is declarative. Declarative knowledge is the type of knowledge that is easily drawn from short-term memory. Semantic knowledge, the third and deeper type, is hierarchically structured and contains relationships between its component parts. The deepest type of knowledge is episodic, organised by episodes in space and time and is highly autobiographical, for instance records of telephone conversations documenting the way sources react to certain questions as opposed to others

The ECI approach to media management emphasises metadata and the need for a control centre that would operate much like an Intranet. The tasks such an Intranet would perform are: the management of users, security and roles (procedural knowledge), interfacing between workflow and content management (procedural knowledge) and providing access to data and information connected by metadata (declarative and semantic knowledge). It seems, therefore, that the functions performed by the control centre are primarily knowledge management functions and so it makes more sense to consider that area of the ECI to be a knowledge management system and develop it accordingly. Workflow and metadata, in particular, are important aspects of a knowledge management system for a newsroom.

## 6. Workflow

Workflow is the central process of a newsroom. Newsroom workflow has not changed much since the first newspaper was published and still involves routing a news story from a journalist to an editor to a sub-editor and finally to a designer. At each step of the way the news story is approved

or modified. However, when analysed, the situation is normally far more complex, especially with the new processes for publishing on a multitude of new content platforms (see Sabelstrom Moller, 2001). A common mistake made when developing digital workflow systems for newsrooms is to simply map out and digitise all possible scenarios based on the current analogue model, as opposed to rethinking the way news production works (Marks, 2005). The mapping-out of existing systems approach assumes that everything already works properly so, in many cases, the result of workflow analysis is the further institutionalisation of systems that do not work properly.

The way in which a newsroom workflow is structured can have significant impact on the efficiency of the editorial process and therefore it becomes very important to choose between a model which essentially attempts to minimise deviation from a Standard Operating Procedure (SOP) and one that attempts to empower knowledge workers, in this case journalists, to make more decisions themselves. The static SOP model has as its most attractive advantage the consequent standardisation of news flow that is relatively inflexible for the users. This guarantees that all journalists follow the same procedures thereby limiting the possibility of error. The disadvantage, however, is the likelihood of bottlenecks in the system when particular people are away from their desks or when situations arise that do not fit the predefined procedures encoded into the workflow logic.

If one sees the workflow process as a procedural knowledge management function, it follows that the workflow system need not be merely an enforcement system for pre-existing procedural rules but rather one that actively collects and collates new procedural knowledge based on the actual processes in the newsroom. Figure 12 illustrates simply how such a dynamic SOP workflow process would function.

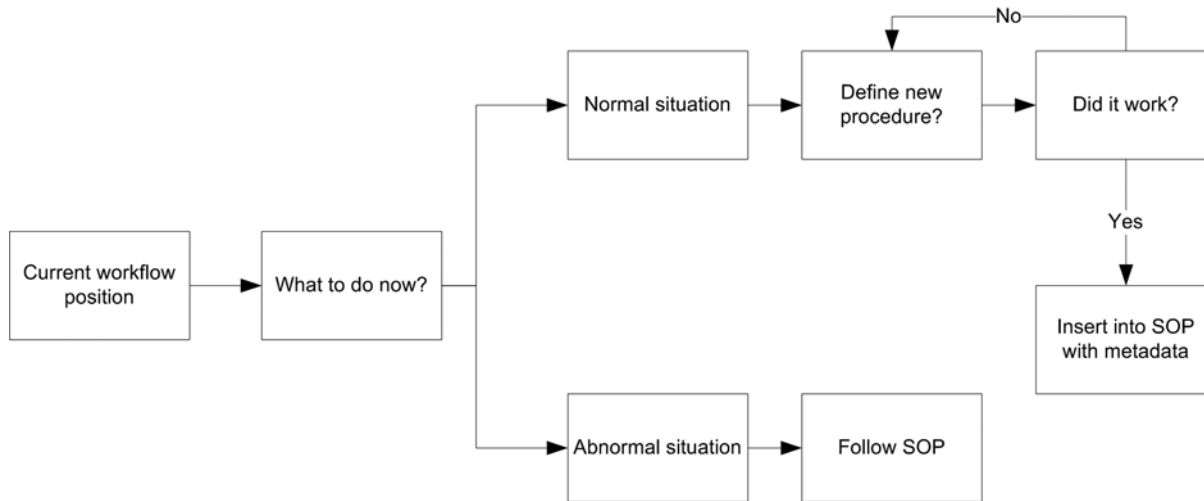


Fig. 12 (Model representing a dynamic Standard Operating Procedure (SOP) in action.)

In this model, the journalist would be able to choose between a set of SOPs or have the option to create a new procedure based on their particular circumstances. If the new procedure is successful, it is recorded and can become part of the SOP options when such a situation re-occurs. As an example, one journalist may have found a better method for fact-checking a certain type of story than those used by the other journalists in the organisation. Or perhaps, a formula for trawling targeted online sources. The journalist may not always want to share this method with his or her co-workers but, because the system allows for a deviation from the standard approaches, if desired this new process can become available to everyone else in a completely transparent, and replicable, manner.

One of the most attractive benefits of this type of approach is that, when combined with an effective content management system, it allows for the easy inclusion of new processes as news digital publishing platforms are added. Furthermore, it

creates a dynamic learning process for the individuals in an organisation that allows them to actively contribute their procedural knowledge to the broader sphere of operational knowledge in the organisation. In addition, successful SOP additions become a permanent part of the organisational process, even after the person who set them up leaves the organisation. A further benefit of using a dynamic SOP model for workflow management is that technically this type of system is easier to implement and can be adapted to any newsroom situation because the SOPs are recorded by the newsroom management and staff, as opposed to being pre-programmed by outsourced developers.

## 7. Metadata

The classification and categorisation of information plays a critical role in its transition from information to knowledge. Just as data requires it being connected to other data to establish itself in context as information, so information requires adequate metadata taxonomies before it can be-

come knowledge. Metadata taxonomies can range from contextual groupings of data to complex semantic rules for hierarchical relations between complex informational units. For instance, semantic knowledge of how a particular government structure works would comprise understanding the hierarchical relations between the different offices, ministries and departments, with contextual rules on each level describing discrete data and informational units.

As the type of knowledge an organisation attempts to capture becomes deeper, it becomes more difficult to capture but more useful in the long-term. Both semantic and episodic knowledge require a sophisticated and very dynamic metadata capturing system in order to gather such knowledge. This type of knowledge gathering would also involve a significant time investment from knowledge workers to make the system useful because they would be required to explicate what is predominantly tacit knowledge. Tacit knowledge, for example, how co-operatively a certain source has been acting lately, is stored in the mind of the journalist and is not readily available, whereas explicit knowledge already exists in policy documents, reports or news archives [Bukowitz and Williams, 1999].

Not all deeper knowledge is directly useful however. For instance, a knowledge store that contained an editor's hot-metal typesetting experiences does not help the organisation work better. However, the dynamic SOP workflow, as discussed earlier, would quickly gather a significant amount of procedural knowledge that is based on the accumulated semantic and episodic knowledge of the newsroom staff. In this sense, this procedural knowledge provides a more valuable resource in that it has direct utility to those working in the newsroom. With the appropriate metadata for each SOP, this procedural knowledge can easily be accessed as semantic or episodic knowledge by

changing the question from "what do I do next?" to "why do I do X when Y?" This model may seem futuristic but is, in fact, one of the core ontological underpinnings of the latest developments by Tim Berners-Lee, the inventor of the World Wide Web. His work on the architecture of the Semantic Web<sup>1</sup>, a dramatically different model for online publishing will be used for the purpose of digitally managing rules, taxonomies and ontologies in a standardised manner so that knowledge can become machine-readable and understandable. If Berners-Lee is successful, users will be asking their web browsers intelligent questions like "why are there so many conspiracy theories about the assassination of John F. Kennedy?" rather than searching by keyword on Google and finding the information they want through trial and error. The Semantic Web is still in the early stages of development and most of the applications currently available are conceptual prototypes so it is difficult to base strategic plans for metadata schemas on a concrete specification. To some extent, however, it is possible to plan ahead by selecting software solutions that have open and standardised extensibility services that allow for future development. Once again, interoperability and extensibility are the key criteria for selection of software solutions.

## 8. Software tests and findings

During the initial period of project planning there was significant debate about the relative benefits of open-source software as opposed to a series of concerns regarding usability, software maturity and the availability of support and skills for future development. These are fairly standard discussions that will take place during a software evaluation process and the conclusion was to begin prototyping the web publishing and workflow applications through a series of tests run on publications within our control.

The first two tests took place during the National



Arts Festival which is held annually in Grahamstown where our university is based. The School of Journalism and Media Studies produces Cue, the official festival newspaper, as a collaborative project between staff and students and the newspaper is widely read by festival goers. Cue is a broadsheet paper ranging from 16 to 24 pages in length daily for the ten days of the festival and employs approximately 60 staff members during the production period. The third test took place in 2006, testing the use of the web publishing applications for the Grocott's Mail web site. Grocott's Mail is South Africa's oldest independent newspaper and serves the Grahamstown community.

### **Test 1: Cue 2004: Closed workflow with cascading editorial policy**

Until 2004, Cue had used a folder-based workflow system so it presented an ideal opportunity to test an automated workflow management system.

It was decided to begin by developing a closed workflow system, one that would predefine roles and responsibilities and enforce strict workflow rules based on the tasks and permissions assigned to a user. Each user was assigned to one or multiple groups (for instance, editors, sub-editors, writers, photographers, etc). The system would specify the available tasks the user could perform based on how tasks were assigned to groups. A linear process was defined for the flow of copy and photographs in consultation with the news editor beforehand, and then programmed into the system. Our assumptions in this area were that we were working each year with a new generation of inexperienced students. A previous weakness of the newsroom workflow process had been lack of conformity to the rules laid out by the editorial team. The idea now, therefore, was for a system with strictly enforced rules would ensure that all content would follow the same path through the system smoothly and in a dummy-

proof manner.

To assist in managing the accountability of student reporters, the system (controversially) also produced real-time graphs of average times spent writing as opposed to sub-editing, published a list of people who had missed deadlines and calculated what percentage of the total deadlines missed could be attributed to which individuals. On the positive side, the daily diary of stories could be viewed alongside a graphic representation of the overall completeness of each story, and the paper as a whole. This gave the editorial team a birds-eye view of the process as a whole.

It was further decided to allow designers and editor to assign stories to pages in the newspaper. The resulting hierarchy of content was used as a set of publishing rules for the Cue web site which comprised a series of templates that accessed the workflow database in order to render the pages of the web site. This cascading editorial policy was informed by the following assumptions. Firstly, we assumed that the web site would not follow a different editorial style in terms of the choices of lead stories and photographs from those made for the paper. The web site was going to be a direct replica of what was available in the paper and the criteria in testing this was to make the web site publishing process completely transparent to the newspaper editorial team. Secondly, because of the limited duration of the event and the paper, the web site was to act as a historical archive of the stories and photographs used in the newspaper and, therefore, had to be a close if not exact approximation of the print offering in terms of content.

The workflow system was developed using Macromedia ColdFusion, a proprietary web application server based on Java 2 Enterprise Edition (J2EE) that supports rapid application development. We assumed that the development time using this



product would be significantly quicker than developing with PHP, the open-source equivalent.

Despite the inevitable chaos that emerges when attempting to set up a newspaper on a brand-new workflow system over a one-week period, we reached several strong findings that ran counter to our initial assumptions.

The first finding was that the rigidity of the workflow process caused substantial frustration for both the journalists and editors working under deadline pressure. The first problem emerged when new contributors arrived late at night to file stories and could not log in because they did not have existing user accounts on the system. Rather than getting new accounts created, they logged in using other journalists accounts but could not submit their stories because there were no corresponding story assignments connected to the user profile they were using to access the system. This problem was fixed by training a new system administrator who would be present in the newsroom late at night. The second problem emerged when the editors moved from their workstations to that of the writer to assist with the final draft of the story or to coach new writers. Looking over the writer's shoulder, the editors wanted to submit the story to the designers but could not easily switch user profiles on the writer's computer without losing information. While the editors were working with writers a bottleneck in the editor's inbox prevented copy from arriving at the designers. At the root of this problem was a restriction within the system that a writer could never send a story to a designer without first getting the editor's approval and routing the story via a sub-editor. This was a classic case of rules that work on paper but not in practice. While the system was working structurally correctly, it did not allow for the easy handling of exceptions.

The second finding related to the photo manage-

ment system. The newspaper published gray-scale photographs and the photojournalists were uploading gray-scale photos into the photo management system. The unfortunate result was that the web site was publishing photos without colour. The work-around for this situation was for the photographers to upload colour images and have the designers convert them to gray-scale. This caused other problems, for instance the submission of CMYK formatted images instead of RGB, once again causing problems on the web site.

The third finding was that the web site automation was highly successful once the other problems had been ironed out. In many cases the journalists and editors were completely unconscious of the fact that pressing buttons in the newsroom had an effect on the structure and formatting of the web site. As a result, significant time was saved for the web team.

By the end of the first test we had decided to take a radically different approach the following year and then compare results. On the whole the test was a success and, despite points of frustration for the editorial team, the newspaper was published on time every day and without the mishaps of previous years with a folder-based workflow.

### **Test 2: Cue 2005: Open workflow with independent editorial policy**

The following year we decided to experiment with a different workflow structure and this time to develop it using open-source software. The workflow system had a single login for all newsroom staff, allowed everyone do everything, requiring only that they provide their name and designation before making changes to content. Effectively this meant that a writer could by-pass an editor, that a designer could delete a story and that a photographer could delete another photographer's images.

To our astonishment the system worked more efficiently than the previous one. The editorial staff had established the workflow procedures outside of the system, during a series of planning meetings, and were happier to have the extra flexibility.

In parallel, we had decided to publish content from the system manually to the web site and established a separate editorial process for the web content to repackage stories for the mobile platform we introduced that year. This introduced several new tasks into the web production process, but allowed us to exert more control over the length of content published on the web site.

From this experience we concluded that the best solution moving forward was to take a lighter approach to rule enforcement but to continue with basic permissions control. These changes have been implemented in the current prototype of the workflow management system but are yet to be tested in a production environment.

### **Test 3: Grocott's Mail using the web publishing system without workflow**

The third test we conducted began in March 2006 with the launch of the Grocott's Mail web site running on a prototype of the Digital News Room web publishing application. The prototype of the publishing system was built using PHP, MySQL and Apache (all open-source products) and features very basic workflow management including a step for filing a story and a step for sub-editing the story.

The main area of focus during the development of this system was usability and the simplification of potentially complex publishing actions. What we had found in many newspaper content management systems is that the content input forms frequently reflected the structure of the underlying database rather than the structure of the work

that the system would be used to do by the end-user. For example, many content management systems will categorize stories according to sets of metadata or categories but new categories must be input independently of the stories associated with them. From the sub-editor's perspective, the creation of categories is secondary to the creation of stories and yet they cannot input the story into a category until the category exists in the database. Interface design flaws like the previous example are the result of several factors: programmers not thinking about usability, the limitations of the web browser as an application programming interface and bad project planning and system design.

In our planning phases, the key objective was to enable a journalist to do everything she needs to do to publish a story on a single page. This includes entering the headline, byline, blurb and body of the story, choosing a publication date, selecting the appropriate photographs, associating metadata and other relevant media, for instance audio or video files.

The duration of this test is ongoing, and has so far proved successful with relatively few modifications to the software.

## **9. Current Project Scope**

The project scope for Nika was formulated in 2005 based on the ECI model using Open-Source Software as a total solution for small to medium-sized newsrooms that required a total redesign of their information and knowledge architecture. In rolling it out, a variety of functionalities will be incorporated building on the workflow and CMS experiences listed above, but also including other Knowledge Management components such as an Intranet.

## 1) Phase 1

a) The development of a Content Management System for news web sites. This system was later called Digital News Room (DNR) and would have the following features:

- i) News publishing
- ii) News archiving
- iii) Metadata and search indexing
- iv) Photo management
- v) Newsletter automation
- vi) Really Simple Syndication (RSS) feeds for the latest stories
- vii) User registration
- viii) Comment facilities on all stories
- ix) Article ranking by users
- b) The development of a workflow automation system for news production with the following features:
  - i) Workflow process creation
  - ii) User and group management for the association of workflow steps to either individuals or groups
  - iii) History management and archive search
  - iv) Photo management

## 2) Phase 2

a) The development of a server installation with the following software pre-installed:

- i) Linux (Operating System)
- ii) MySQL (Database Server)
- iii) Apache (Web Server)
- iv) PHP (Application Server)
- v) DNR and DNR Workflow (Applications)
- b) The development of a client installation with the following software:
  - i) Open Office (Office Automation)
  - ii) Firefox (Web browser)
  - iii) GIMP (Photo editing)
  - iv) Scribus (Desktop Publishing)

The resulting systems configuration will be one based completely on open-source software and tailored to the particular application set required in a newsroom.

## 10. The future of the project

The Nika project is an ambitious one that will, no doubt, take several more years before it reaches completion. During this time we expect that several key software components will mature, particularly Gimp, the photo editing software and Scribus, the desktop publishing software that we plan to bundle with the client CD.

The scope of the project has been extended to offer a complete solution from the operating system level and upward. This means that organisations that would like to use open source applications for photo-editing, DTP and document composition can do so in conjunction with the workflow and web publishing applications we provide as part of the Nika server. But in line with ECI, the system should also be able to stitch together a range of extant software systems.

As part of the client bundle we have decided to use the following open-source software:

- GIMP (<http://www.gimp.org/>): GIMP is currently the most mature open-source photo-editing and manipulation application
- Scribus: (<http://www.scribus.net/>): Scribus supports press-ready DTP outputs and has an easy-to-use interface for page design.

Once produced and properly piloted at Grocott's Mail, Nika and its components will be disseminated through partnerships with interested newspapers and generally through the Highway Africa network which includes many aspirant publishing entrepreneurs. For a number of adopters, support and training will be needed in the early stages, and

a degree of adaption. New clients may also need to source additional revenues, for example so as to modify Nika to operate in kiSwahili, Setswana, Shona, or Chichewa. Their Knowledge Management principles and employment practices, as well as existing technologies, need to be taken into account.

The intention, however, is that the project will have impact long after its three year timeline – in capacitating African media houses to take advantage of contemporary thinking and systems. If all this assists in deepening the continent's media in democracy and development, the extensive R&D work entailed by the New Media Lab will be well worth while.

## Footnotes

<sup>1</sup> For more information about the Semantic Web, see <http://www.w3.org/DesignIssues/Semantic.html>.

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# Chapter 11:

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